THIS WEEK'S National Petroleum NEWS

Index to Coming Meetings

Pennsylvania Grade Crude Oil Association, Wm. Penn Hotel, Pittsburgh, 12:30 P.M. July 8, luncheon and annual meeting.

Independent Oil Men's Association of New England: Wollaston, Mass., July 10; Fall River, Mass., Aug. 14; Providence, R. I., Sept. 11; Worcester, Mass., Oct. 9.

West Virginia Oil Marketers Association, Daniel Boone Hotel Charleston, W. Va., June 13, 14.

North American Gasoline Tax Conference, Book-Cadillac Hotel, Detroit, Mich., Aug. 7, 8, and 9.

International Petroleum Congress, Tulsa, Oct. 5 to 12.

Independent Oil Men of America, Stevens Hotel, Chicago, Oct. 21, 22, 23.

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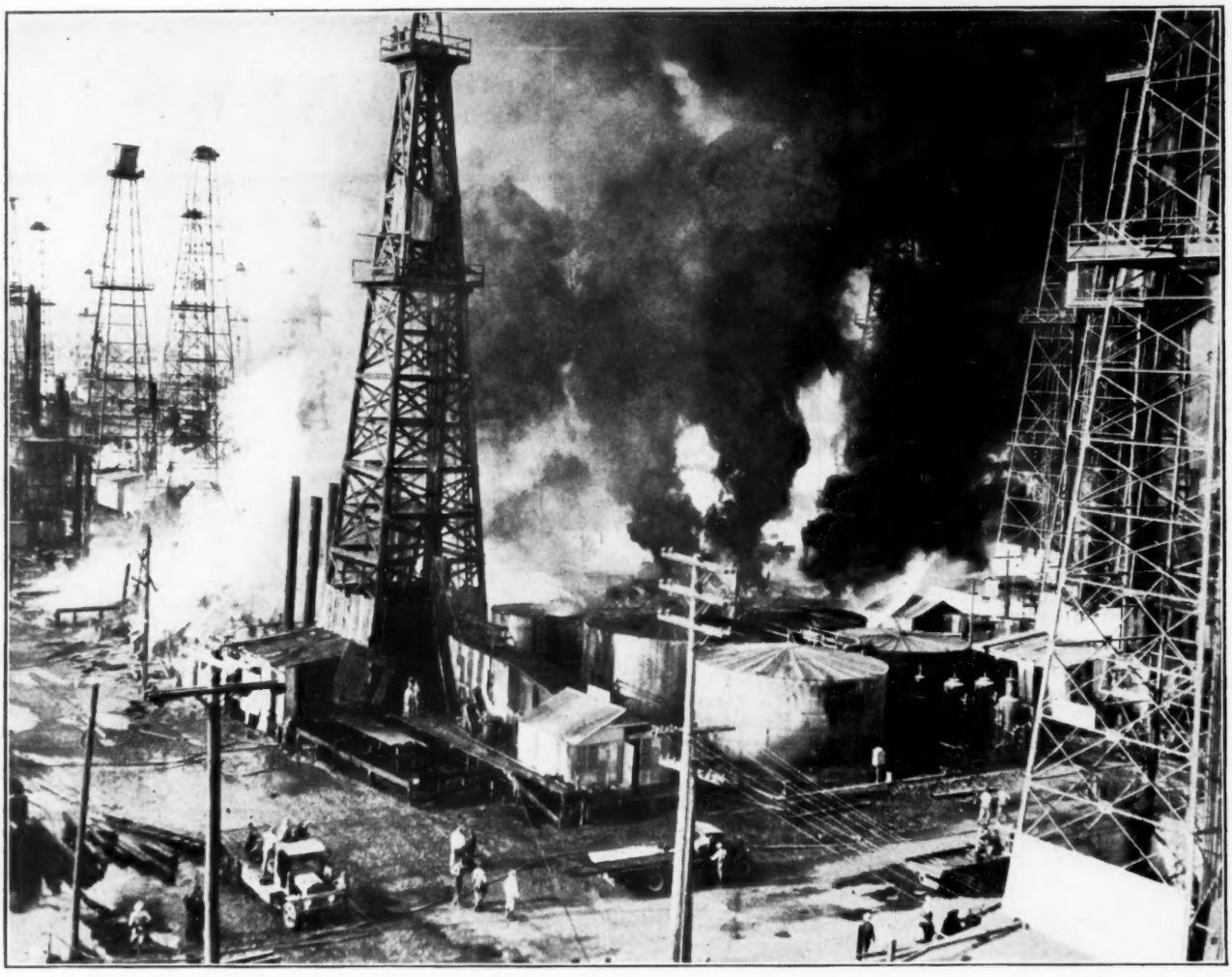
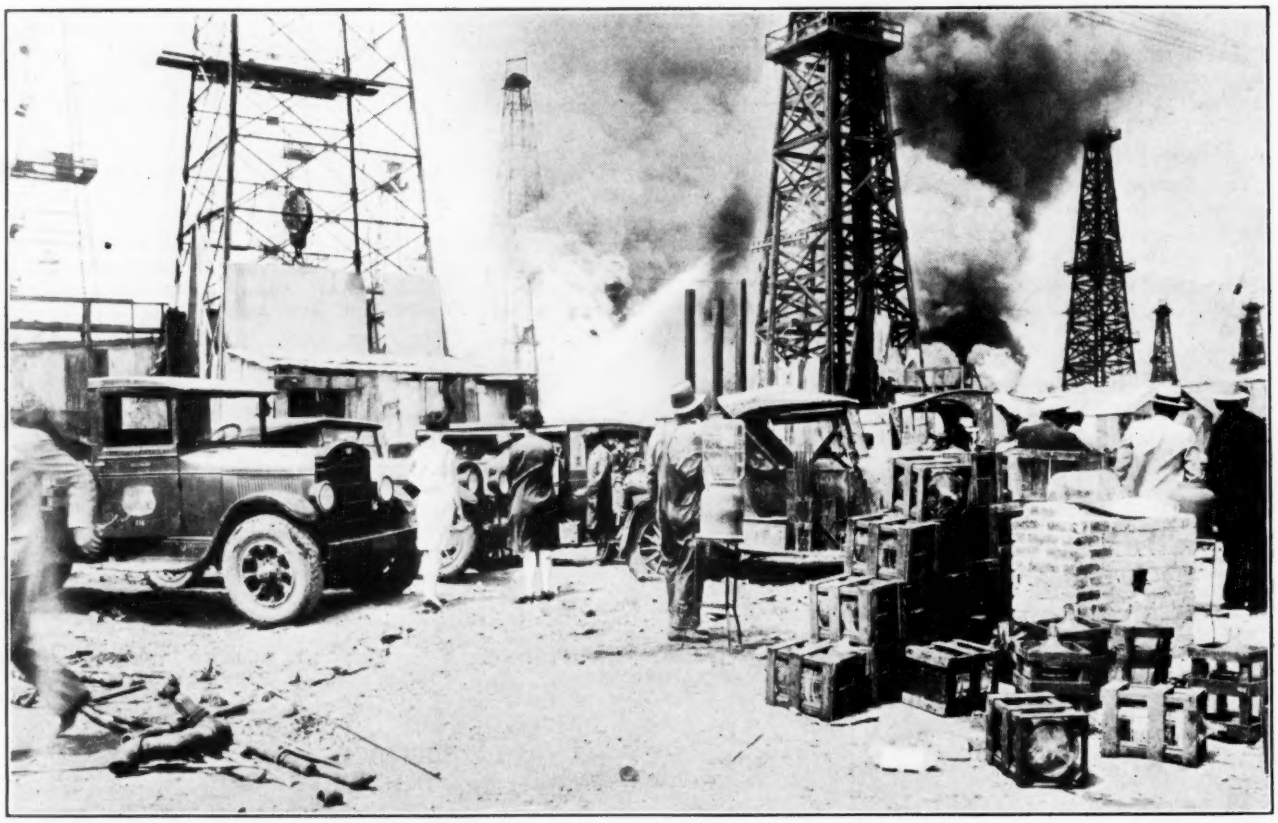


—Underwood & Underwood



Wind machines such as are used by the movies in creating synthetic cyclones aided fire fighters in controlling Santa Fe Springs' fourth destructive oil fire. Asbestos clad firemen were able to approach the wells and divert the escaping oil with the strong artificial wind at their backs.

Seven rigs were destroyed by the fire and total losses ran into millions. The blaze was caused probably by high pressure oil reaching a storage tank direct from the McAdams Rhode No. 1.

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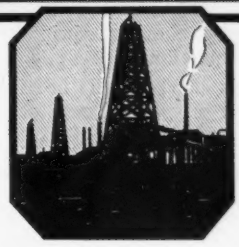

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Vol. 21 CLEVELAND, June 19 No. 25

U. S. Motor Gasoline Specifications Changed; New Grade Established

By J. C. Chatfield
N. P. N. STAFF WRITER

CLEVELAND, June 17

THE Federal Specifications Board, at Washington, has revised distillation specifications for U. S. Motor gasoline and also published specifications for a new grade of gasoline to be known as Motor Fuel V. The new grade is more volatile than U. S. Motor.

The specifications drawn by this board govern the purchasing of all government departments, including the army and navy. The board's gasoline specifications have also been adopted in 12 states as standard for motor gasoline sold there.

The changes in U. S. Motor specifications made June 11 include the establishment of a minimum as well as a maximum 10 per cent point. This was done in spite of a protest lodged by the oil industry advisory board at a conference with the federal board at Washington March 15.

The new distillation range provides that "when 10 per cent has been recovered in the receiver, the thermometer shall not read more than 176 F. (80 C.) nor less than 122 F. (50 C.); provided that, for each per cent distillation loss less than 4 per cent, obtained in the A.S.T.M. distillation, the minimum 10 per cent temperature requirements shall be lowered 5.4 F. (3 C.)."

In establishing the new 10 per cent point the board made special note that the government reserves the right to lower the maximum, by proper provision in the contract or purchase order. It may be lowered either 9 or 18 degrees F., depending on temperature conditions expected at the time the fuel is expected to be consumed.

By footnote, contracting officers are advised that in general the expectation of freezing temperatures warrants the lowest maximum 10 per cent temperature.

A second reservation is made with respect to gasoline which is to be used for special purposes such as storage in tropical climates. In such cases the minimum 10 per cent point may be raised to 140 F. (60 C.) In the same footnote the board warns that this specification should not be used except where absolutely necessary since the gasoline with such a high 10 per cent point is less satisfactory for general purposes.

The 50 per cent point, in the new specifications, was left unchanged at 294 F. (140 C.), the 90 per cent point at 392 F. (200 C.) and the end point at 437 F. (225 C.). The 20 per cent point was dropped. The requirement of a 95 per cent recovery is continued. No changes were made in test methods, sulfur content, or the corrosion test requirement.

The new flexible 10 per cent point does not differ greatly from the proposals of the federal board which were attacked by the industry last March. The permissible lowering of the minimum for each per cent gain in recovery is more lenient than was suggested.

At that time it was proposed to lower the minimum 10 per cent point 3 degrees F. for each per cent gain in recovery. The industry proposed as an alternative that the minimum be lowered 10 degrees F. for each per cent gain in recovery above 96 per cent.

THE board's action in allowing 5.4 degrees lower for each per cent gain in recovery is in the nature of a compromise between the two views. Under this specification a gasoline with a recovery of 98 per cent might have a minimum 10 per cent point of 111.2 F.

It is understood that the minimum 10 per cent point was established to avoid the possibility of vapor locking. The natural gasoline branch of our industry opposed the provision vigorously at the March conference on the ground that wide adoption of the new specifications as trade standards might tend to limit the amount of natural gasoline which could be used in blending.

National Petroleum News complete staff report of the proceedings at the Colorado Springs conservation conference is to be found in this issue starting on page 29.

The address in favor of a tariff on petroleum products presented before that conference by Wirt Franklin, independent operator, Ardmore, Okla., is to be found in this issue starting on page 43.

Some of National Petroleum News staff pictures of delegates to the conference are carried in this issue. Many others will appear in its next issue.

Technologists of the natural gasoline industry assert it is not the 10 per cent point which governs the tendency toward vapor locking but rather the slope of the distillation curve in its early part. The slope, it is said, indicates the presence or absence of dissolved fixed gas in a motor fuel and the vapor locking tendency.

U. S. Motor gasoline specifications as given in Technical Paper 323B have been adopted by 12 states as minimum standards for gasoline to be sold in those states. Six of these states provide that the specifications are to change with any changes made by the Federal Specifications board.

The six states whose specifications change automatically are Arizona, Montana, Nebraska, North Dakota, Virginia and Wyoming. Those which have incorporated the former specifications but do not provide specifically for changes with federal amendments are, Alabama, Florida, Georgia, New York, North Carolina and South Carolina.

One state now has minimum as well as maximum distillation specifications. South Dakota has a minimum 5 per cent boiling point of 120 F. and a maximum of 170 F. It has a minimum 20 per cent point of 158 F. and a maximum of 221 F.

It was planned originally by the board to set up a winter specification for U. S. Motor gasoline. This was fought by the industry since it would complicate trade because of the wide adoption of the grade by various states.

As a substitute the industry suggested that a special grade be set up, more volatile than U. S. Motor, which might be used as a basis for the government's purchases of gasoline for special purposes. It was this proposal which led to the new Motor Fuel V.

The proposal for a special new grade was made by an American Petroleum Institute committee composed of J. Howard Pew of the Sun Oil Co., chairman; E. S. Hall, Standard Oil Co. of New Jersey; W. M. Irish, Atlantic Refining Co.; E. W. Isom, Sinclair Refining Co.; F. T. Klein, The Texas Co.; and L. W. Parsons, Tidewater Oil Co.

Motor Fuel V specifications become effective Sept. 11 as a mandatory requirement. They may be utilized at any time before then, however. The fuel is more volatile than U. S. Motor but less volatile than aviation gasoline. It is to be purchased for use in ambulances, fire engines and other special equipment.

Following are its specifications as adopted:

1. This specification covers a special grade of fuel which may be used by the Government at the discretion of the head of the department or bureau concerned and its agencies, for ambulances, fire engines, emergency vehicles, military and naval equipment, and for other equipment under special conditions.

2. This fuel shall be free from water and suspended matter.

Properties and Tests

3. Sampling.—Samples shall be taken according to procedures described in Part 3 of United States Government Master Specification No. 2d, or latest revision thereof.

4. Corrosion Test.—Method 530.22. A clean copper strip shall not show more than extremely slight discoloration when submerged in the fuel for 3 hours at 122 F.

5. Distillation Range.—Method 100.13. When 10 per cent has been recovered in the receiver, the thermometer shall not read more than 149 F. (65 C.), nor less than 122 F. (50 C.); provided that, for each per cent distillation loss less than 4 per cent, obtained in the A.S.T.M. distillation, the minimum 10 per cent temperature requirement shall be lowered 5.4 F. (3 C.).

When 50 per cent has been recovered in the receiver, the thermometer shall not read more than 257 F. (125 C.).

When 90 per cent has been recovered in the receiver, the thermometer shall not read more than 356 F. (180 C.).

The end point shall not be higher than 401 F. (205 C.).

At least 95 per cent shall be recovered as distillate in the receiver from the distillation.

6. Sulfur.—Method 520.11. Sulfur shall not exceed 0.10 per cent.

7. All tests shall be made according to the methods of testing contained in Part 2 of United States Government Master Specification No. 2d, for Lubricants and Liquid Fuels (Bureau of Mines Technical Paper 323B), or latest revision thereof.

Cities Service Buys Loreco Stations

CLEVELAND, June 18.—Cities Service Oil Co. has bought the marketing properties in Ohio of the Louisiana Oil Refining Corp., Shreveport, La. The property consists of 15 bulk plants, 125 service stations and the necessary equipment to serve the service station and dealer set-up.

The bulk stations are in Cincinnati, Hamilton, Middletown, Dayton, Springfield, Georgetown, Winchester, Hillsboro, Bainbridge, Wilmington, Washington C. H., Xenia, London, Marysville and Bellefontaine. The service stations are known as "Loreco" stations, the trademark of the Louisiana corporation.

Most of the service stations are in the larger cities of the chain. There is some distribution in Kentucky across the Ohio river from the Cincinnati bulk plant, which formerly was owned by the Ohio Refining Co. The stations in the northern part of of the territory were developed by the United Oil Products Co. of Springfield and the Marysville Oil Products Co. of Marysville.

Cities Service recently bought the Duncan Oil Co. which had bulk plants and 42 service stations in Youngstown and Akron, O. Two months ago it acquired the Fairmount Oil Co. of Cleveland which had bulk plant and 17 service stations in Cleveland.

S. O. Ohio Buys Control Of Caldwell & Taylor

CLEVELAND, June 18.—A new corporation, styled the Caldwell & Taylor Corp., is being organized by the Standard Oil Co. of Ohio and Caldwell & Taylor, Inc., of Cincinnati to take over the assets of Caldwell & Taylor, Inc., which has 125 owned, leased or controlled service stations, in southwestern Ohio and two bulk plants.

T. J. Taylor, who has been president of Caldwell & Taylor, Inc., will retire, W. T. Holliday, president of Standard, announced, and A. B. Caldwell who has been vice-president of the Cincinnati corporation, will be president of the new corporation. Mr. Caldwell has taken a substantial stock interest in the new company, Mr. Holliday said. Control lies with the Standard, however.

The present personnel and organization of the Caldwell & Taylor interests will not be disturbed, but will be operated as heretofore, Mr. Holliday said. The new corporation will be supplied with products from the Standard's new refinery at Latonia, Ky., in the Cincinnati switching district.

The business of Caldwell & Taylor was formed in 1920 and incorporated in 1926. Besides its own wholesale and retail distribution, it did tank car marketing of gasoline, particularly of a benzol blend motor fuel, which was marketed under the Caldwell & Taylor name from Columbus to Cincinnati.

Refiners Oil Buys Ohio Jobber

DAYTON, Ohio, June 15.—Refiners Oil Co. has purchased the Ohio Valley Oil Co., East Liverpool, Ohio, owned by Frank G. Jones. It took over this company a few days ago, according to an announcement from W. E. Talbot, general manager, including service stations and dealers' business as well as truck routes in East Liverpool and vicinity.

Mr. Talbot says this is the seventh company Refiners Oil Co. have purchased since the first of this year, in line with its expansion program.

Requa to Press for Definite Action On Interstate Compact

By V. B. Guthrie
N. P. N. MANAGING EDITOR

COLORADO SPRINGS, June 14

THE idea of an interstate compact to work out a practical operating program for the oil industry, in the interests of conservation of oil and gas, is not disposed of as a result of President Hoover's state and national conference here June 10 to 12.

What further discussion is given the proposition will involve political considerations having to do with the government's leasing policy on public lands and also having to do with a tariff on oil. Politics has heretofore been absent from the industry's talking and planning a conservation program.

These two conclusions stand out as a result of what Secretary of the Interior Wilbur called at the start "the most important industrial conference ever held in this country," but where the facts and logic of the executives in the oil industry were greatly subordinated to the oratory of their counsel.

The Colorado Springs conference recessed, not adjourned, to study the feasibility of the compact idea, methods of procedure, and so on, and is to meet again on the call of the President.

On the surface, this might seem a polite and respectful way in which the oil industry is letting down as impractical the administration's suggestion of the oil state compact method of meeting the conservation problem.

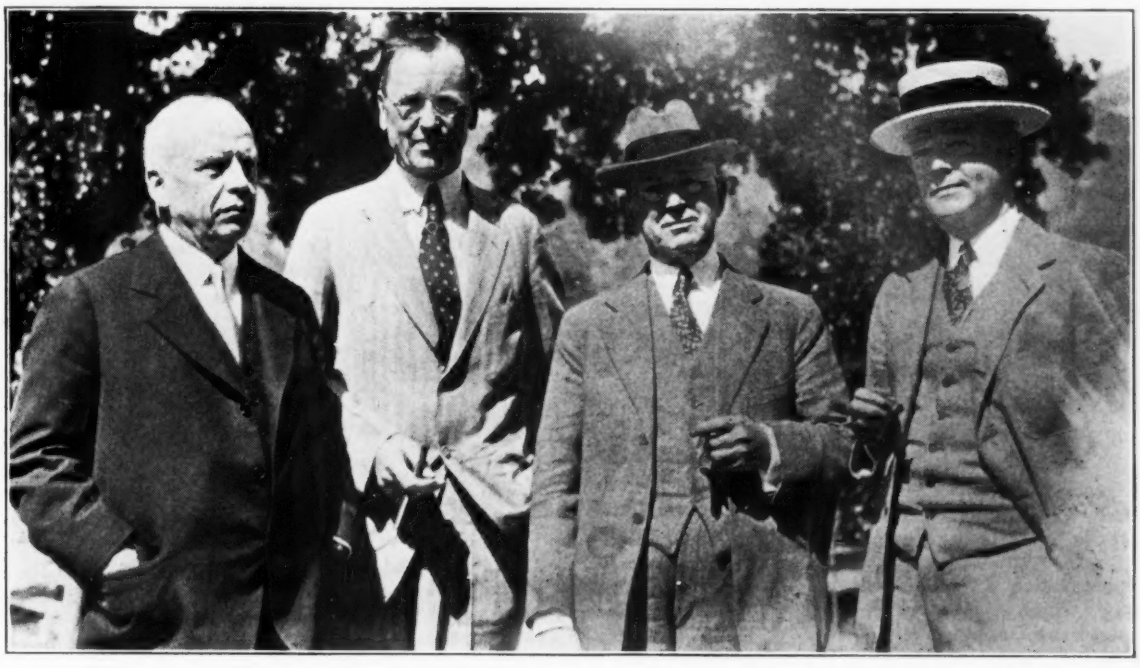
This is far from the case, however. Just as the idea of the compact came from without the industry, so the procedure in following the idea through is largely outside the industry's hands.

Mark L. Requa, President Hoover's emissary to the oil industry, is going to make it his future mission to push the compact idea through to some kind of a conclusion, so he announced at the close of the Colorado Springs meeting. With no active business connection, of independent resources, with the administration's backing, and with the idea of the necessity of some form of government regulation of the oil industry, to which he has held unswervingly since the days of the war, those who know Mr. Requa know his statement is not to be taken lightly.

Then again, Mr. Requa is working directly through the governors of the oil states and not through the oil industry, or the oil associations. An element of national politics is involved which is a new factor for the oil industry to consider. The governors will listen to the oil industry in their states, of course, and they will appoint oil men, as well as representatives of the states, on their state delegations. Politics will be a factor, as well as the industrial point of view.

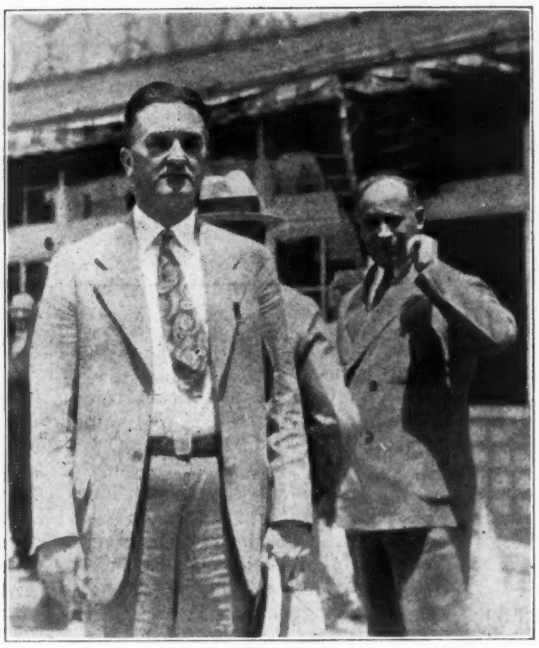
An extra pack the oil industry carries, as it starts out on this search for a conservation program, is the protest of the Rocky Mountain states against the President's executive order withdrawing the public lands from future oil development. Through the insistence of the delegations from these states, a demand for modifications of that order is a plank in the platform of principles set up to be considered in any interstate agreement and read into the record of the meeting. This is a specific instance where politics may come into the consideration of what heretofore has been largely an industrial problem.

Also adding to the extra load the



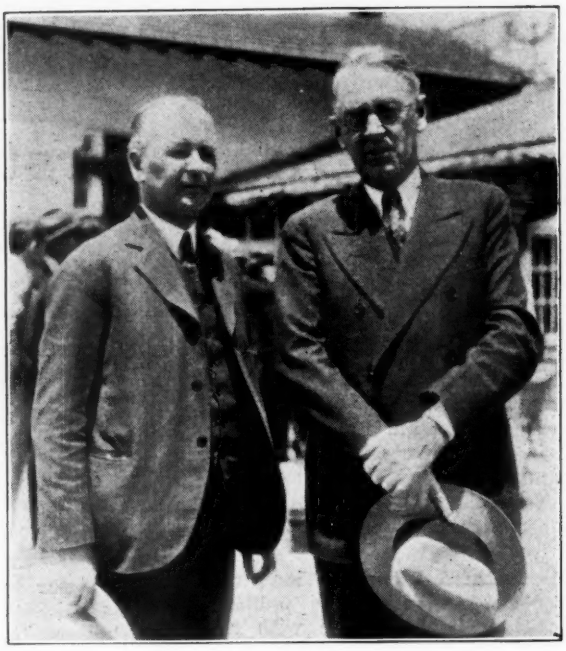
—N. P. N. Staff Photo

W. M. Irish, Atlantic Refining Co.; J. C. Trees, of the Benedum & Trees interests; W. S. Fitzpatrick, Prairie Oil & Gas Co. and L. W. Young, South Penn Oil Co. All except Mr. Fitzpatrick were delegates from Pennsylvania to the Colorado Springs conference



—N. P. N. Staff Photos

Wirt Franklin, Ardmore, head of the company which bears his name, was one of the speakers. He was elected president of the new Independent Petroleum Association of America, formed at Colorado Springs. At right is E. B. Reeser, president of the A.P.I. who didn't know he was part of the view



—N. P. N. Staff Photos

Two gentlemen from Oklahoma. Harry H. Smith, secretary, Mid-Continent Oil & Gas Association and John H. Kane, vice-president, Phillips Petroleum Co.

oil industry carries, as or if it travels up the road of an interstate compact in search of a practical conservation policy is the demand of the Independent producers for a tariff on crude as part of any organized conservation effort. If sentiment of the oil industry in Oklahoma particularly, is to be built up in favor of an interstate compact, the ideas of these Independent producers must be considered on a problem that is also largely political in nature.

The oil industry has tried its own hand, over the past two or three years, at bringing about a practical conservation program for the whole industry, without any great degree of success. Now, with some relief, it turns the helm over to the administration's advisers in this present program, offering its cooperation in the effort to secure an operating agreement which will permit the oil companies to initiate and follow through cooperatively, certain steps to save gas and oil which steps the companies do not feel secure in taking by themselves at present, under the anti-trust laws.

At the same time the industry's leaders made it plain at the Colorado Springs conference that they would resist any effort to secure an interstate compact which would be coercive in character, which would, by regulation and the exercise of police power, take away the right of the oil industry to work out its own destinies and would place it with some outside board or agency.

During the conference President E. B. Reeser, of the American Petroleum Institute, introduced into the official record a statement drawn up and approved by the delegates of the institute present, which said in conclusion: "We are of the opinion that coercive power to create or enforce police regulations within any given state cannot legally be conferred upon an interstate commission."

Delegates from the states representing the state administrations, rather than the oil industry in those states, were equally emphatic against the idea of an interstate compact with coercive rather than permissive powers. That section of the formal address of Chairman Requa, in which he stated that no one would be more insistent than himself in urging "rigid government coercive regulation," in the event that conservation was not forthcoming through cooperative efforts of the oil industry, drew return fire on more than one occasion.

Finally Mr. Requa formally attempted to amend this statement to place the emphasis on the creating of an opportunity for the industry to cooperate in permissive regulation, rather than upon the alternative of coercive regulation.

The address on behalf of a tariff on crude oil and refined products presented before the Colorado Springs conference by Wirt Franklin, Ardmore, Okla., representative of the Southern Oklahoma Oil & Gas Association, is to be found in this issue starting on page 43.

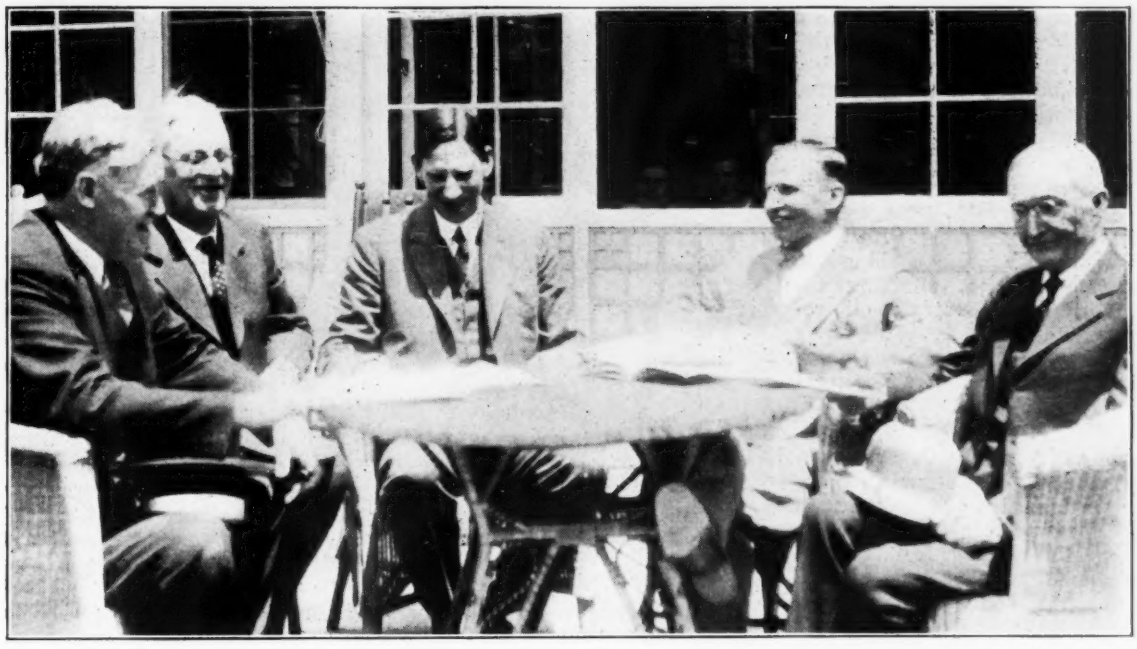
The Colorado Springs conference was a novel experience for the oil industry in more than one way. It was the first occasion it has been drawn into a discussion in which politics played a considerable part, politics in the sense of the issue between state rights and centralized national government. As was undoubtedly foreseen by those who arranged the conference, the calling of a meeting to discuss national oil policies, to be held in the heart of the public land states, smarting under President Hoover's executive order, was just like poking a stick in a hornet's nest.

This conference was the first time, since the withdrawal order was issued last March, that representatives of the states and that portion of the oil industry affected, have had an official opportunity to protest.

Chairman Requa's formal statement drew the lightning on this point also. He said, in almost his first paragraph, "The withdrawal order is an act of statesmanship and demonstrates his (President Hoover's) grasp of the economic problem of petroleum. It is timely, wise and patriotic."

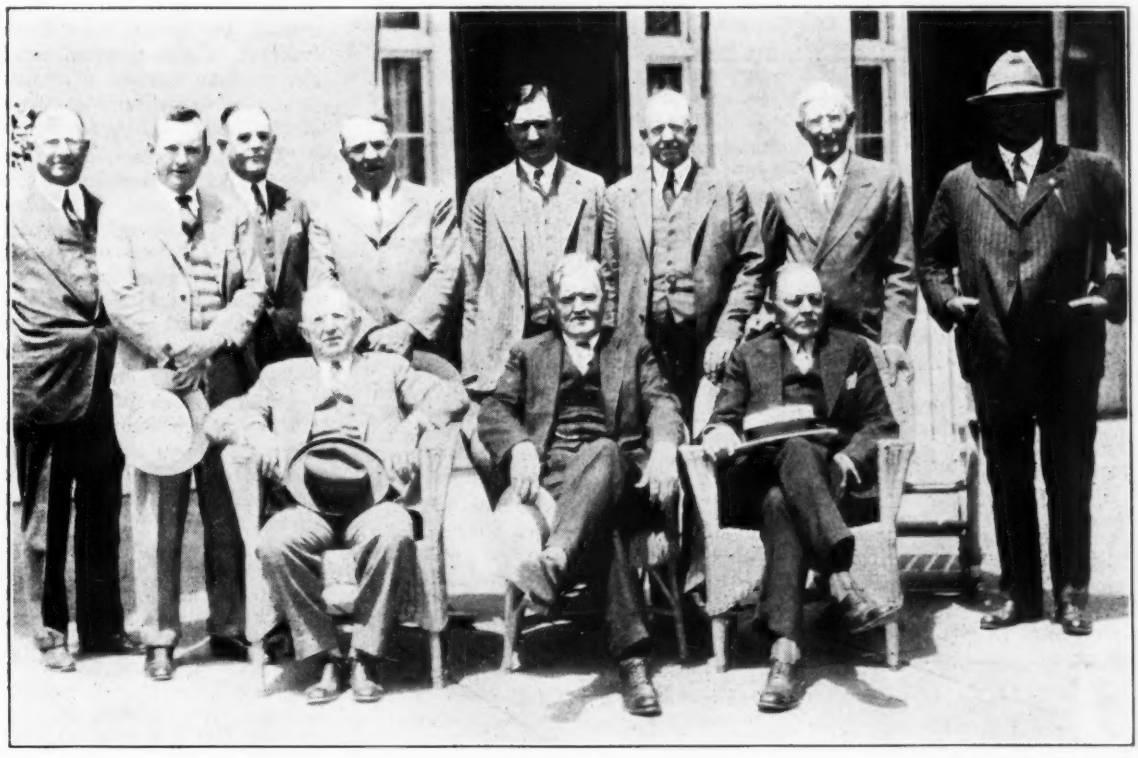
Three fourths of the discussion at the Colorado Springs conference was against the withdrawal order as closing the doors in the states of Wyoming, Montana, Colorado and New Mexico, to the discovery and development of new oil fields in those states, the revenue from which development, it

(*Continued on Page* 32)



N. P. N. Staff Photo

Four governors and the secretary of the interior. Left to right, Governor Reed, Kansas; Erickson, Montana; Secretary Wilbur; Emerson, Wyoming and Adams, Colorado



N. P. N. Staff Photo

Part of the Kansas state delegation. Standing, left to right, A. L. Derby, Wichita; A. M. Landon, Independent; Tom C. Johnson, Wichita; S. J. Houston, Wichita; J. R. Porter, Arkansas City; J. S. Longshore, Topeka; Dana H. Kelsey, Independence and E. S. Rule, Wichita. Seated, same order, W. S. Fitzpatrick, Independence; Governor Reed and F. A. Pielsticker, El Dorado. All except Messrs. Fitzpatrick and Derby were of the governor's delegation, the former representing the A.P.I. and Mr. Derby the Mid-Continent Oil & Gas Association

was pointed out, was so necessary to the future growth of these states. Hardly were the official addresses of Secretary Wilbur, Director George Otis Smith of the U. S. Geological Survey, President Reeser of the institute, and Chairman Requa finished when the public land states moved into the spotlight.

Governor Frank Collins Emerson, Republican, of Wyoming, later appointed secretary of the Colorado Springs conference, told of the amount of public lands in his state. He questioned how far his state could go in an interstate compact affecting development of the country's oil resources, which stayed exploratory work in his own state while encouraging it in states which have no great amount of public lands.

Governor John E. Erickson, Democrat, Montana; Attorney General Robert E. Winbourn, of Colorado, whose governor attended and Chairman Hugh S. Woodward, of the delegation from New Mexico, and former Governor Bryant B. Brooks, of Wyoming, representing the Rocky Mountain Oil & Gas Association, and others drew a picture of their states and set apart from other states in future oil development.

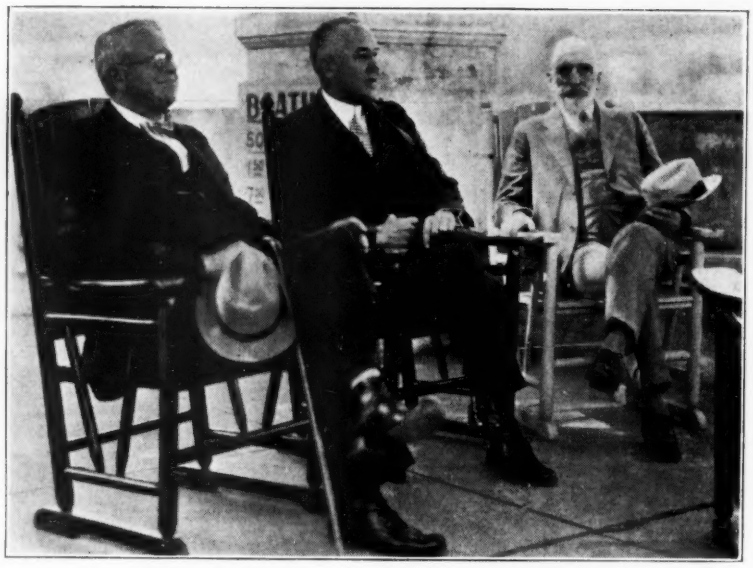
They showed that their oil resources were believed to be largely potential resources on public lands; that what oil has been developed on these lands so far has not been sufficient for their own market needs; that their present oil fields are operated under direct government supervision and without waste. To a man they questioned whether their state legislatures would sanction their participation in any interstate agreement while development of their own oil resources was locked up by Executive Order 338.

The representatives of these states pleaded their case long and fluently. Contrary to the report which seems to have reached the floor of congress at Washington, there was no attempt by Chairman Requa even to halt the flow of logic and oratory. Each man talked as long as he wanted even though his listeners' thoughts turned more and more insistently to luncheons growing cold.

Resolutions from the floor of the general conference were barred, however. Chairman Requa had made this plain at the start of the meeting and it applied on all questions and to all delegations.

Representatives from the public land states were not without support from the industry elsewhere. Delegates from the Independent producers' associations in the Mid-Continent and from the royalty owners' association, come to Colorado Springs mostly to insist on a plank for tariff on crude in any platform drawn up by the conference, spoke on behalf of the industry in the Rocky Mountain states in its opposition to Order 338.

At the end of the first day of the conference rumor was current that the delegates from the public land states would withdraw, or even ask from the floor that the conference be ended. The morning of the second day was more of the first day. Continued into early afternoon, Chairman Requa found that each representative from either a state or an oil association, had addressed the conference or been given a chance to do so. Then the general conference was declared ended.



—*N. P. N. Staff Photo*

Tom O'Donnell, Los Angeles; K. R. Kingsbury, president of the Standard Oil Co. of California and B. B. Brooks, former governor of Wyoming

That afternoon, according to the program outlined at the start of the conference, a smaller, more official conference began, made up of delegations from the states attending, each with two or three representatives, one designated as chairman and spokesman. The following states were represented: Texas, Oklahoma, California, Kansas, Louisiana, Arkansas, Pennsylvania, Montana, Colorado, Wyoming, New Mexico and Utah. They were to discuss possible methods of procedure to follow in securing an interstate oil compact.

Governor Clyde Martin Reed, Republican, Kansas, who had spoken on behalf of the compact idea early in the open conference, but had taken no active part in the debate, took the leadership among the state representatives at the smaller conference. He introduced a statement of principles as a proposed plan of procedure. This statement read as follows:

"Petroleum is a natural resource, so peculiarly essential to the national welfare in every way, and so definitely possible of exhaustion through both use and wastage, that the most careful consideration of ways and means of conserving it for the benefit of the entire nation is a primary duty of both national and state governments, and of all economic agencies having a relation to the subject.

"The present situation is an alarming one, involving as it does a tremendous economic waste in this non-replaceable commodity vital to our welfare and our business development.

"Production, transportation, refining and distribution of petroleum are so carried on that the circumstances in every situation must be considered to arrive at sound conclusions as to the correct policy to be followed in the interest of the general public and of the various parties of interest in the industry, including owners and lessees of the land from which oil is taken.

"We are agreed that the present situation in petroleum production and use is a deplorable one, involving as it does uneconomic and wasteful methods in production, uneconomic methods in refining and sale, and the diversion of a large proportion of the crude product into uneconomic uses."

The chairman of the conference is empowered and directed to appoint a committee representative of the (principal) oil producing states to consider the whole subject; to confer with the governors of the various states and with all parties of interest and to make a report to the national and state governments with its recommendations as to the general policy found to be proper, including both legislative and administrative action deemed advisable. Not as a restriction upon its discretion, but as a statement of general policy from the conference as a whole, the following is offered for the information and consideration of the committee:

(Then followed ten principles which were in most cases identical with the revised set of principles as presented by Governor Reed and published later in this article)

Article 9 of Governor Reed's principles carried to the delegates from the public land states the hope of an effort to secure modification of Executive Order 338, and Wyoming, Montana and Colorado swung to the

support of the governor's statement. Representatives from the principal oil states of Oklahoma, Texas and California took exception to some of the declarations therein, and refused to support it in entirety.

The Oklahoma delegation balked at the statement that "the present situation is an alarming one, involving, as it does, a tremendous economic waste"; also at that which read; "We are agreed that the present situation in petroleum production and use is a deplorable one," etc.

Governor Reed defended these statements as setting forth an economic, rather than physical, waste and stated that, if the proposal for legislation of any kind was to come before Congress, need for that legislation must be shown to exist in present conditions in the industry.

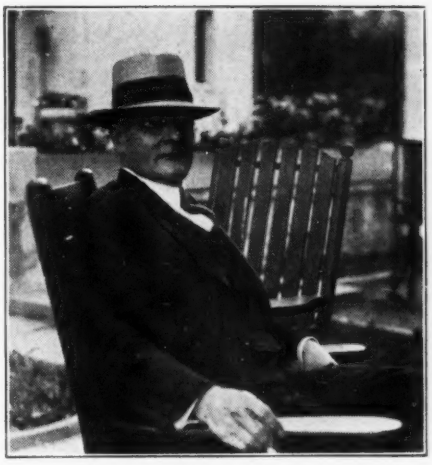
For Texas, M. M. Crane, former attorney general, saw in Governor Reed's statement possibility of relinquishment of certain state rights to a national supervisory board, and of national legislation regulating or controlling oil production in Texas.

California supported her sister major oil states. Thus was set up a group of three states, having more than three-quarters of the oil production in this country, with a corresponding capital investment, which leaned towards a conservative policy in proceeding with the idea of an interstate compact and a new operating program for the oil industry. Urging a more progressive policy with regard to the compact were Kansas and three public land states, with the rest of the public land states inclined to swing in with the latter group.

This stalemate continued through an afternoon and following morning of debate and conferring. Finally, in lieu of anything else, an agreement was reached, in the interests of harmony, to the effect that a resolution drawn up by the Oklahoma delegation, was to be unanimously endorsed. It read as follows, with its brief introduction:

"The official delegates from the states of Texas, California and Oklahoma, after a consultation among themselves, instead of making a recommendation for immediate action, believe that, in view of the facts developed during the sessions of the conference concerning the main objectives sought to be accomplished by it, and believing that a further study of the problems involved would likely attain better results offer the following:

"To continue the work of the conference of governors called by the President and now in session, it is the judgment of the conference that a recess be taken subject to re-assembling upon call of the President of the United States. The governors of the several oil producing states are requested to be present upon such reconvening of the conference and that they each bring with them or send to the conference three official delegates."



N. P. N. Staff Photo

Judge J. W. Finley, Empire Companies, Bartlesville, was one of the official delegates representing Kansas

So, in the afternoon of June 12 the general conference was convened for a few moments and J. B. King, assistant attorney general of Oklahoma, presented the foregoing resolution. It was unanimously adopted and then Governor Reed read into the record the report concurred in by Kansas, Wyoming, Colorado and Montana. This advocated a commission to study interstate compacts and make a report to the state and national governments. This commission was to consist of state delegates appointed by the governors, and representatives of the federal government appointed by the president.

In the final draft of his set of principles presented to the general conference to be read into the record Governor Reed had also become more specific as regards the interests of the public land states, stating that "present conditions justify consideration of the effect of Order 338 of the Department of the Interior, to determine the advisability of substantial modification." His complete revised statement read as follows:

"To continue the work begun by the conference of governors called by President Hoover and now in session, we deem it advisable that a representative, or representatives not exceeding three in number from each of the oil producing states, to be designated by the governor of each state, and a representative or representatives of the government of the United States, to be appointed by the President, constitute a commission to consider the entire subject of the conservation of oil and gas resources of the nation and make a report to the national and state governments, with recommendations as to the general policy found to be proper, including both legislative and administrative action deemed advisable.

"We request the representative to be appointed by the Persident to enter into correspondence with the governors of the various oil states with a view to making this resolution effective:

Official Sub-Committee of Conference

Chairman—Mark L. Requa, consulting engineer of the Federal Oil Conservation Board.

Texas—M. M. Crane, former attorney general, chairman; C. V. Terrell, state railroad commissioner; C. L. McCartney, attorney, Brownwood.

Oklahoma—J. B. King, assistant attorney general, chairman; E. W. Marland, James Veasev, counsel, Carter Oil Co., Tulsa.

California—F. C. Stevenot, director, Bureau of Natural Resources, chairman; U. S. Webb, attorney general; W. J. Carr, state railroad commissioner.

Kansas—Gov. Clyde Martin Reed, chairman; A. M. Landon, independent producer; F. A. Pielsticker, Skelly Oil Co., Dana H. Kelsey, Prairie Oil & Gas Co.

Arkansas—J. W. Olvey, Marine Oil Co., chairman; C. G. Murphy.

Louisiana—Major W. Scott Heywood, Jennings.

Pennsylvania—J. C. Trees, Benedum & Trees, chairman; W. M. Irish, Atlantic Refining Co.; L. W. Young, South Penn Oil Co.

Montana—L. Dennis, chairman; Gov. John E. Erickson; C. J. Dousman.

Colorado—R. E. Winbourn, attorney general, chairman; Gov. William H. Adams; J. T. Barnet, Mountain Producers Corp.; R. D. Hawley, Continental Oil Co.

Wyoming—Gov. Frank Collins Emerson, chairman; C. M. Cox, commissioner of public lands; W. O. Wilson, attorney general; B. B. Brooks, ex-governor, president Rocky Mountain Oil & Gas Association; A. C. Campbell.

New Mexico—H. B. Woodward, lieutenant governor, chairman; F. C. Wilson; H. R. Crile, B. C. Mossman; L. C. Staley.

Utah—W. R. Wallace, vice president, Utah Oil Refining Co., unofficial.

N. P. N. Staff Photo

Left to right; W. S. Farish, Humble Oil & Refining Co.; W. J. Carr, railroad commissioner of California; R. A. Broomfield, Barnsdall Oil Co. of California and W. M. Keck, Los Angeles

"1—That, in the development of a sound general policy, cooperation and coordination of state and national authority is not only desirable but essential.

"2—That adequate regulation of production methods in the several producing states and sections is highly desirable in the interest of avoiding waste and of reducing production costs and that, so far as the organic law of the several states will permit, uniform legislation should be enacted and uniform administrative regulation adopted.

"3—That within the limits of practicability and sound policy, production should be limited to the economic necessities of any particular period or region.

"4—That exploration for the purpose of locating additional oil supplies is not to be limited since no waste of the product is involved thereby. We declare information of the location and probable extent of such supplies to be of value in dealing with the whole question.

"5—That economical methods of controlling production from existing large pools and from those hereafter discovered should be devised and made effective.

"6—That the commission should consider the extent to which the policies herein declared to be advisable can be made effective through compacts between the states and the extent to which national assistance through legislation and administration is necessary and advisable.

"7—That in working out a national policy, due consideration should be given to all interests including consideration of the situation in the so-called public land states as well as in those states in which oil development is being carried on from privately owned lands; and that present conditions justify consideration of the effect of order 338 of the Dept. of Interior to determine the advisability of substantial modification.

"8—A correct policy of conservation is that which will insure the use of this invaluable natural resource to the whole people. That will give to the owner of the land where it is found the maximum recovery and will allow production refining and marketing to be carried on at a minimum cost, keeping in mind that not only the immediate cost of production and present price to the consumer are involved but also the ultimate value of this resource to the nation as a whole."

After Governor Reed had read his statement into the record he called for a roll call by states to see which would support it in addition to the four states which signed it.

Chairman Requa then jockeyed the Oklahoma, Texas and California group into a position they refused to accept by saying they had also dissented from accepting the Reed statement. Mr. Crane, for Texas, a representative from California, and James Veasey, counsel for the Carter Oil Co., for Oklahoma, were quickly on their feet denying that this correctly stated their position. They said they could subscribe to many of the principles in Governor Reed's statement, but not to all.

One speaker likened the procedure to placing a witness on the stand, putting several questions to him at once and them asking him to answer yes or no for all of them.

William R. Wallace, vice-president of the Utah Oil Refining Co., unofficial observer for Utah and not voting, rose at this point to say that the difference between the two groups was only one in rate of progress desired and that the main and satisfactory result was that something had been accomplished.

For Louisiana, Major W. Scott Heywood offered the following resolution which was adopted without discussion:

"We recognize that the oil situation has international as well as national aspects and that the importation of oil is a factor in the situation in this country which must be considered in any policy dealing with the entire subject."

Then the conference recessed to meet again upon call of President Hoover.

Later Chairman Requa issued a statement. He also said he would make a report to President Hoover, then retire to his home in California to devote himself to his "mission" of furthering the idea of an interstate oil compact as a means of bringing about conservation in any way that might offer. His official statement follows:

"The petroleum conference at Colorado Springs called by President Hoover accomplished some very definite results. In the first place, thanks to the wide newspaper publicity, it focused the eyes of the nation upon one of the most pressing and vital national industrial problems. During the conference a great deal of information was forthcoming that cannot help but be of great and lasting benefit.

"This was merely a preliminary conference. It was not expected that it would formulate any final and definite plan. That it did, however, secure the cooperation and support of the delegates is evidenced by the unanimous adoption of the resolution sponsored by the States of Texas, Oklahoma and California, suggesting that a further study of the problems would be desirable and that the conference recess subject to the future call of the President of the United States and urging that the governors of the oil producing states be then present with three delegates from each state.

"In addition to this the governors of Kansas, Colorado, Wyoming and Montana presented a statement vigorously attacking waste and urging remedy. In view of the fact, however, that Texas, Oklahoma and California produce 85 per cent of the oil, the four governors above mentioned were agreeable to vote for the resolution presented by the three states merely asking that their views be inserted in the record.

"I think in short that the conference has accomplished all that could be expected of it and is a distinct step forward. It will undoubtedly be followed by another meeting and at that time some of the delegates of the various states will, no doubt, be prepared to suggest a very definite plan of procedure."

We—Not the Tire Agencies—Will Run One Stop Stations—*Say West Virginians*

By Roger B. Stafford
N. P. N. STAFF WRITER

CHARLESTON, W. Va., June 14 THE marketing division of the petroleum industry is the logical operator of automobile one-stop, or super service, stations and not the tire industry, was the opinion expressed by R. Edwin Spears, president of the West Virginia Oil Marketers Association, at the association's two-day convention here this week.

Mr. Spears' opinion was concurred in by several speakers from the floor. It was expressed in a discussion of an address by Sherill E. Leonard, associate editor of *India Rubber & Tire Review*, Akron, a publication which has been active in propagating the one-stop station idea among automobile tire dealers.

Mr. Leonard's contention was that the tire dealers who were building or planning to build super service stations were experienced in the merchandising of tires and other day-to-day needs of motorists, that they had established credit ratings, and that they are well established in their communities and doing big businesses.

"The gasoline station operator is not the logical man to become the super service station operator," Mr. Leonard said near the conclusion of his address. "He is not a merchandiser, he has never serviced tires or batteries; he has no credit rating and in most cases is merely a poorly paid, hired attendant, whose capacity is limited to placing the hose in the gas tank of the motorist.

"Neither do battery service men and garage attendants know the fundamentals of tire servicing. Their work has been done from a purely mechanical standpoint and their training has not fitted them to meet the public and operate the type of stations which the motorists are demanding."

When Mr. Leonard concluded, Mr. Spears said he doubted if there was an oil man present who had not been approached by some tire manufacturer in recent months to take on the sale of that manufacturer's products. He said the tire industry was anxious to have petroleum marketers sell tires, which proved to his mind that the oil men were not such bad merchants after all.

W. M. Rauscher, Rauscher Bros. Co., Milford, O., a visitor at the convention, said he had been in the tire business for many years before he engaged in the oil marketing business, and that he had lost all but his shirt selling tires and the reason the tire manufacturers were advising and helping their dealers to get into the oil and gasoline business was so the dealers could get a fair profit, he said. Mr. Leonard had stated that the super service tire dealers wanted to sell oil and gasoline because those products were the magnets that drew in other business.

Mr. Rauscher pointed out that the merchandising of tires was becoming more and more difficult because of the bonding feature which is now involved in selling tires. He said old mileage guarantees were bad enough but the bond guaranteeing tires against punctures, rim cuts, blow-outs, blisters and other ills, formed an additional peril to dealers' profits.

One-stop stations constituted only one of today's marketing problems that came before the West Virginia convention which drew approximately 150 men of the oil and allied industries to Charleston.

The theme of the convention was, "Looking Ahead," although it had not been so billed. Lubrication and its trends, aviation, better merchandising, goods of standardized quality, the code of ethics and what it may accomplish, were topics of other addresses or discussions.

J. T. Kelly, Jr., salesmanager, L. Sonneborn Sons, Inc., New York, directed his talk on "Salesmanship" at the men who are operating service stations. The men who work at service stations, should be salesmen and not mere attendants, Mr. Kelly emphasizes.

He advocated that some incentive should be held out to the men in the way of profit sharing so they would take a keener interest in serving the public in the manner the public wishes to be served.

He cited examples of poor salesmanship at service stations where a salesman's blundering question, "Five gallons," suggested a smaller purchase to the customer than the customer had in mind when he drove into the station, and meant a decreased profit from the particular customer.

Service station men, Mr. Kelly said, should be instructed in the fundamentals of selling, in the requirements of the oil business, and the necessity to make as large sales as possible. They should study their customers' needs and strive to fulfill those needs.

A. M. MAXWELL, vice-president, Standard Oil Co. of Ohio, Cleveland, in a talk on a "General Trend Toward Better Marketing," pleaded for the throwing aside of suspicions of the oil men's fellow marketers. Co-operation must be substituted for suspicion, Mr. Maxwell said.

He laid to suspicion of the "other fellow," many of the recent ills of our industry. Suspicion among producing companies had resulted in overproduction. Suspicion of refiners by producers when the over supply of crude oil brought lower crude oil prices, brought in new refineries resulting in an over supply of refined products, dumping of the surplus on the market, and the demoralization of all price structures, he declared.

Cooperation of the last year among producers, refiners and marketers, Mr. Maxwell said, has begun to have some effect, adding:

"I wish to impress upon you that it is not my feeling alone, but the feeling of by far the great majority of

New Officers

PRESIDENT of the West Virginia Oil Marketers Association—R. D. Lowe, manager, Elk Refining Co., Charleston.

Vice-President—Commander G. C. Davidson, president Tri-State Refining Co., Kenova.

Secretary—To be chosen by the directors.

Directors—C. A. Street, market manager, Viking Gasoline Corp., Charleston; F. G. Bish, manager, Appaline Oil Co., Clarksburg; R. Edwin Spears, Spears & Riddle Co., Wheeling; W. R. Reitz, secretary-treasurer, Ohio Valley Refining Co., St. Marys; J. W. Right, manager, Elk Refining Co., Huntington; John Claypool, manager, Aracoma Oil & Gas Co., Logan; R. M. Bell, Bell Oil Products Service Co., Lewisburg; B. J. Maynard, president, Maynard Bros., Williamson; B. W. Krodell, Burnside Oil Products Co., Point Pleasant; W. A. Jackley, manager, South Penn Oil Co., Charleston.

successful marketers that the larger companies are not trying to put out of business the smaller marketers but hope to cooperate with them so there will be a fair margin of profit for both, and to give the public petroleum products on an honest, fair basis of cost. I am sure the public will have no objection to any legitimate marketer making his fair and honest profit."

In answer to several questions submitted to Mr. Maxwell by D. E. Frierson, Frierson Equipment Co., Charleston, secretary of the West Virginia association, Mr. Maxwell said he did not believe the efficient small Independent marketing company would pass out of the picture.

He predicted that curb pumps would disappear except in some small communities where a drive-in service station was illogical. Local ordinances, had already caused many curb pumps to disappear, he said, and added he believed that few were being installed at present.

Mr. Maxwell advised the marketers to sell a good anti-knock motor fuel. He said that no one could hope, in this day of high compression engines, to sell only the regular fuel and increase his business.

If the marketers expect to supply airplanes with fuels they should see that they handle a good aviation fuel, Mr. Maxwell recommended. Attempts to fly airplanes with ordinary motor gasoline have been made and are still being made, especially at the flying fields set up by barnstorming or "tramp" airplane operators, but the efforts were not promising success.

He warned against monopolies in gasoline service at municipal airports. Aviation business should be thrown open to all competitors that can supply a satisfactory fuel, he said. He made this assertion, he explained, even though his own company enjoyed a monopoly at some Ohio airports.

The possibilities of making profits with grease were outlined by J. L. Lyons, Damascus Mfg. Co., Cleveland. Mr. Lyons is the brother of the late Col. U. G. Lyons, for several years president of the National Petroleum Association.

"The manufacturing world is becoming educated more and more to use grease instead of oil wherever it can be economically and conveniently applied," Mr. Lyons said. "Vast mechanical lubricating systems are being installed in most modern manufacturing plants for the purpose of distributing grease instead of oil to all bearing surfaces. Roller and ball bearings are increasing by leaps and bounds on all moving machinery.

"The slogans in the manufacturing world are increasingly 'Reduce Friction,' and 'Stop Wear.' In consequence grease is becoming so important as an adjunct to the oil business that I venture the prediction that some day in the near future it will have as great a percentage of your sales in dollars and cents as your oils will have, if not greater.

"Mines, mills, railroads, manufacturing plants of every description, truck fleets, bus fleets, contractors, automotive dealers, and the countless repair shops and garages are all users of grease in greater or less quantities, and all deserving of your attention of prospective customers for this product."

"The great sale of mineral oil today is for the lubrication of internal combustion engines. Think what a market this would be if proper grease were designed to take the place of mineral oil. I believe this is coming in the near future."

Selling grease requires specialized effort, Mr. Lyons said, and he recommended that its sale be not foisted on an oil salesman.

"Have competent men that know how to convince the prospect that he can make money by handling your product and who knows what grease is best adapted for the proposed lubrication," he advised. "Misapplication of grease happens just as often as the misapplication of oil with the same resultant dissatisfaction."

He said grease salesmen should see that their customers have the proper equipment for the application of grease. If necessary, he said, grease jobbers should supply the dealer with the equipment and charge the dealer with its cost.

New Association Formed At Colo. Springs

COLORADO SPRINGS, June 15.—A new association, whose name is the Independent Petroleum Association of America, was formed here the evening of June 11, at a meeting of independent producers and royalty owners held in the Antlers Hotel.

The new organization starts out pledged to the support of a tariff on foreign oil and to modification of the federal administration's attitude on public lands. It will work to have the present non-development policy changed so that the industry may once more go ahead with public land exploration. Plans are to be made for an aggressive campaign on both these questions.

Wirt Franklin, Ardmore, Okla., presided at the organization meeting and was elected president for the ensuing year. H. B. Fell, also of Ardmore, was elected executive vice-president. According to organization plans, each of the 19 oil producing states will be represented by a vice-president who will be a director, and one other director. Vice-presidents chosen at this meeting were: Miss Margie Montgomery, Amarillo; E. G. Bedford, Midland, Tex.; W. Scott Heywood, Jennings, La.; R. D. Pine, Okmulgee, Okla.; H. C. Conley, Green River, Utah; J. W. Olvey, El Dorado, Ark.; Dr. A. W. Green, Denver and C. J. Dousmann, Baker, Mont.

In addition to the two directors for each state, an additional director will be chosen for each 150,000 barrels daily production the state produces over the first 100,000 barrels. Membership will consist of Independent producers, refiners, land owners, royalty owners, permit holders, supply men, drilling contractors and intrastate pipe lines. Annual dues are $25 and memberships will be individual. Companies may take more than one membership, but they must be assigned to individuals.

A committee was appointed to write the by-laws and constitution. This committee is H. B. Fell, J. W. Olvey, H. C. Conley, A. W. Green and Miss Margie Montgomery. Headquarters will be maintained in Tulsa and an executive secretary will be appointed. The executive committee consists of Wirt Franklin, Wade H. James, president of the Mid-Continent Royalty Owners Association and Ross D. Pine.

Col. Harry T. Klein, general counsel, The Texas Co., New York, traced the events that lead up to the submittal of a code of trade practices for the petroleum industry to the Federal Trade Commission. Col. Klein was a member of the committee that carried the code adopted at the St. Louis trade practice conference Feb. 11, to Washington. He said the code represented a large number of compromises.

Col. Klein said he expected the commission would make changes before the code is resubmitted to the oil industry. What these changes will be, will not be known until the commission completes its consideration of the submitted draft.

Initial efforts to work out a code were made in 1920 in the territories in which the Continental Oil Co. and the Standard Oil Co. of Indiana were the principal marketers, Col. Klein said, but the real origin of a national code came in 1926 in Virginia as a result of a complaint filed with the Federal Trade Commission by a Virginia oil man. This oil man, not mentioned by Col. Klein, was J. E. Belk, Albemarle Oil & Gas Co., Charlottesville, Va.

Col. Klein discussed in detail the various provisions of the code and the difficulties that had been overcome in reaching the various compromises.

A.S.T.M. Meets at Atlantic City

CLEVELAND, June 15.—The American Society for Testing Materials will hold its thirty-second annual meeting at Atlantic City, June 24 to 28 at Chalfonte-Haddon Hall.

Patent Club Agreements Enjoined By U. S. District Court

By J. C. Chatfield
N. P. N. STAFF WRITER

CLEVELAND, June 15

CRACKING patents owned by the Standard Oil Co. of Indiana, the Standard of New Jersey, The Texas Co. and the Cross interests are not basic patents but cover improvements only.

The "patent club" agreements protecting owners from infringement suits and fixing royalty charges violate the law, are contrary to public policy and tend to fix the price of gasoline.

Such were the findings of the U. S. District Court at Chicago as a result of the suit brought by the government in 1924 to dissolve the patent club. The court held that the government is entitled to an injunction and instructed attorneys for the government and the patent owners to agree on a decree.

This is the first court decree in the five year old case. It is expected that the decision will be appealed by the patent owners.

A meeting of defendants in the suit has been called for Thursday, June 20, to consider whether an appeal is to be taken or what other steps may be desirable according to R. J. Dearborn, Texas Co. counsel. The meeting will be held at New York.

If an appeal is taken from the findings of the Chicago court it will go direct to the United States Supreme Court.

Defendants in the suit consisted of four primary defendants, principal patent owners, and 46 other corporations, mostly licensees of various processes. Primary defendants were the Standard Oil Co. of Indiana, Standard Oil Co. of New Jersey, The Texas Co. and the Gasoline Products Co., owners of the Cross patents.

The opinion of the court upset, for the most part, the findings of Charles Martindale of Indianapolis, special master who heard the testimony and filed a 384 page printed report. Circuit Judges Evan A. Evans, George T. Page, and A. B. Anderson handed down the decision. Judge Anderson dissented from the opinion of the majority stating that in his judgment the master's report should be approved.

Regarding the validity of the patents in question the court did not disturb greatly the findings of the master. Attorney Martindale found that the Adams patent was not obtained through fraud and his finding was sustained. M. W. Kellog & Co. was freed also of charges that it was conspiring to injure Fleming in his sale of Fleming process licenses.

The court was divided as to whether the government had a right to attack the validity of the patents. It was in agreement, however, that it could inquire into prior art to ascertain the scope of claims of the various patents involved.

Conclusions regarding patents themselves were:

"A. All of the patents cover improvements only.

"B. None of them are basic or pioneer patents.

"C. All claims should be construed accordingly.

"For the purposes of this suit, we are not willing to disturb the master's findings that the patents are valid."

THE court made it clear that it was not discounting the importance of the patents because it refused to recognize them as basic patents. Because a patent covers an improvement only, it does not follow that the inventor did not make a real contribution to the art, the court said.

"Moreover, if a narrow patent is valid, it furnishes as sufficient a consideration for a contract based on it as would a pioneer or basic patent and it is as legitimate a subject of cross-license agreement," the judges said.

There were 79 agreements involved in the government suit relating to 76 patents owned by the four primary defendants and one patent owned by the Standard Oil Co. of New York. It was the contention of the government that the many narrow patents for minor improvements were bound together by the agreements to accomplish a restriction which no one company could have achieved.

THE defendant companies asserted that their patents granted them a lawful monopoly but that they lessened the monopoly and fostered competition by granting licenses to use their processes.

"The ownership of a patent unquestionably carries with it certain rights, monopolistic in character," the court announced in its decision. "Nevertheless the owner of a patent can use it as property only subject to the Sherman Anti-Trust Law. That is to say, A, B, C, and D cannot legally contract respecting their patents in violation of the terms of this law . . .

"This right to enjoy a patent monopoly carries with it certain rights incident thereto. Among them are the right to royalties, to grant licenses, as well as the right to handicap competitors by withholding licenses.

". . . But he cannot, merely because of his ownership of a patent, enter into an agreement with another party, perhaps also the owner of a patent, which has for its object or its inevitable result, the burdening of commerce or the lessening of competition *beyond the limits of the patent monopoly.*"

The court asserted that the patent owners had a right to cross license each other. It held, however, that they had no right to make agreements which would extend their monopoly beyond the limits fixed by the patent grant.

The defendants claimed that the

Chronology of Patent Club Suit

Government's petition filed June 25, 1924, in Chicago federal court, alleging a monopoly in the manufacture and sale of gasoline in this country through control of patents on cracking processes.

Special Master Martindale appointed by court March 13, 1925, to take testimony in the case.

Trial begun with taking of testimony before Special Master Martindale Oct. 11, 1926.

Martindale's report filed in federal court Dec. 6, 1926, favorable to defendant oil companies in all points.

Decision handed down by the court June 11, 1929, reverses the findings of the special master in many points.

agreements were made in good faith to avoid patent infringement suits. The court said: "It appears, however, that the principal patents of the primary defendants which were subject to the cross-license agreements may each be practiced without infringing the other."

Examining the agreements themselves in detail the court takes exception to those sections which provide that the various companies acknowledge, in advance, the validity of patents not yet applied for or issued. "The agreement which was made Aug. 26, 1921, protected patents from attack which might be issued as late as Jan. 1, 1937, and which would not expire until 1954," the court stated.

"Such agreements cannot be sustained," the court declared. "By these clauses . . . the parties purchased immunity from attack on their patents. Tying the hands and sealing the lips of the only parties who would ordinarily stand suit and contest the validity of the patents, the primary defendants attempted to fasten on the public burdens which it was not the purpose of the patent law to impose.

"Such agreements violate the letter and the spirit of the patent law and are contrary to public policy."

The court held that the various agreements must be considered together since they interlock. "Viewed as one, they present a situation where the primary defendants not only fixed royalties as between themselves but for their sub-licenses, and provided for a division among themselves of the moneys received from such royalties.

"There appears no logical relation between the protection which attached to the exclusive right which arose from the issuance of the patents and the agreements which the holders of the patents generally entered into. The agreements therefore transcend what was necessary to protect the patents and come within the operation of the anti-trust act."

Those sections of the agreements which fixed license fees which should be charged came in for a special attack by the court. They represented the second important grounds on which it was decided that the agreements violate the Sherman law.

The court admitted that two companies might each own a monopoly by virtue of a patent. But if two competing monopolies combine to eliminate competition the agreements would violate the law. The court could see no difference between packing companies to fix prices or allocate territories.

Much is made of the fact that none of the primary defendants use any considerable number of patents of the others and many patents are not used at all. It is pointed out that no Independent could hope to engage in cracking without infringing one or more of the patents.

"Under these circumstances, the holders of the patents, in fixing royalties by agreement, are in effect and for all practical purposes, entering into an agreement to fix prices," the court held. "For it is affirmatively established that the royalties fixed in the agreements and maintained by the agreements is a substantial part of the cost of refining. In fact, the evidence justifies a finding that such royalties nearly equal and sometimes exceed the profits of outside refiners.

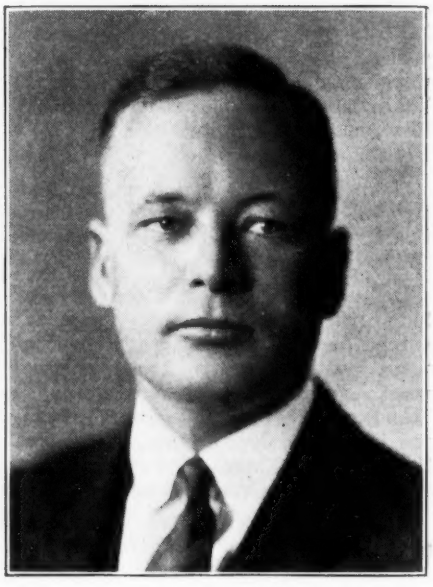
"If then, the royalty charges directly affect the price at which the commodity can be produced, and if the agreements have for their object or their necessary effect, the fixing and maintaining of royalties, they cannot be distinguished from other agreements which have been condemned, the purpose or necessary result of which was to fix prices of a commodity."

Counsel for the government and for the patent owners are directed by the court to agree on the form of a decree to be entered and to report back to the court. If they cannot agree the court will act.

California A.P.I. Division Plans Meeting

W. W. Copp

A. C. Rubel



W. F. Huff

LOS ANGELES, June 14.—Tentative arrangements for annual meeting of the California district of the American Petroleum Institute, division of development and production engineering, during the latter part of this month have been announced by A. C. Rubel of the Union Oil Co., district chairman.

On June 26 a meeting of national executives will be held at the Biltmore hotel, Los Angeles. John Suman, national chairman, and Carl Young, executive secretary, will be present.

June 27 to 29, inclusive, will be spent in reading papers, visiting the oil fields by air, and in a general review of the situation as it affects development and production.

The vice chairman of the California group is W. W. Copp of the Marland Oil Co. of California. W. F. Huff of the National Supply Co. of California, is treasurer of the group.

Review of Late Production News

CALIFORNIA continued to swell the country's production the past week when daily average rose to 2,743,250 barrels, another new peak, the week ended June 15, according to the American Petroleum Institute. This is a gain of 18,800 barrels over the past week, 1000 barrels of that amount being the increase outside of California.

Crude oil imports gained 48,285 barrels, being at the rate of 322,571 barrels daily. Total new supply was 3,065,821 barrels, compared with new supply of 2,997,736 barrels the previous week.

Santa Fe Springs gained 6500 barrels and Ventura Avenue 5000 barrels. Seal Beach went up 3000 barrels and Huntington Beach and Long Beach each 2000 barrels.

Salt Creek gained 4000 barrels. Hutchison county in Panhandle gained 2000; Pecos county 2800 and Sedgwick county 2250 barrels.

California

CALIFORNIA daily average production reached a new peak during the past week when it passed the 807,900 barrel mark.

Few new completions in the O'Connell zone at Santa Fe Spring tended to keep the total figure down. It is expected, however, that a large number of wells will be put on production during the coming week, in this highly productive zone that will swell the state total by 20,000 or 30,000 barrels.

Six new completions at Long Beach added approximately 4000 barrels of new oil to that field's total to give 174,780 barrels from 874 wells. Shell Oil Co. made a new drilling record for deep wells when it reached a depth of 8558 feet.

Marland Oil Co. increased its Seal Beach production by nearly 6000 barrels through the completion of three wells in the Wassem zone.

Apparently California operators did not benefit from their experience and that of others in the Lawndale fiasco, for nearly 50 permits to drill in the Santa Barbara Mesa field have been issued and others are pending.

General Petroleum Corp. has entered into an agreement with Olympic Oil & Refining Co. to drill and produce the Olympic properties in this area on a 50-50 basis.

Olympic's discovery well has not been put back on production because of the lack of storage and marketing facilities.

Drilling at Kettleman Hills has reached an interesting stage as several wells are preparing to drill out the cement. Tests will probably be made at this time although none of the wells are within 800 feet of the depth from which the Milham discovery well is thought to be producing.

Wyoming, Montana

MOST interesting work in the Mountain States this season promises to be the wildcat wells now drilling. The Ohio Oil company, to date, has drilled two failures in Montana and got one new field.

In Wyoming the Midwest Refining company, the Producers & Refiners Corp., and the Texas Production Co. all have several interesting wells with the first-named holding the spotlight for the widely scattered areas it is testing in the state.

Interest in Colorado is also spread widely over the state, but in New Mexico the interest centers in the discovery of the Continental Oil Co., the Pennsylvanian sands in San Juan county, and in the activities in Lea and Eddy counties. This latter territory will make some most important progress in the next few months it is believed.

Oklahoma-Kansas

DEEPER drilling in the Independent Oil and Gas Co.'s No. 1 Burrows SW NW NW of 1-7N-4E proved conclusively the presence of oil in the Wilcox sand in North and central 7N-4E. Opened as a Hunton lime and Simpson sand extension to the Pearson Switch-St. Louis pools the area now appears as one of the state's most likely spots.

The Independent well, which showed for a small commercial producer in the two shallower formations, topped the Wilcox at 4236 swabbing better than 600 barrels in the first 16 hours from a total depth of 4242. In the SW SE NW of 17-7N-4E the area of best Simpson production in the extension, the Magnolia Petroleum Co.'s No. 1 Hubanks is flowing steadily at the rate of 125 barrels an hour from a total depth of 4178 in the Simpson.

Two wells in the Oklahoma City pool appear to be almost ready to drill in to the deep pay. The Sinclair Oil and Gas Co. has recovered the tools from its No. 1 Stampner and are drilling ahead at 6380 with better than 3000 feet of oil in the hole. Mid-Kansas Oil and Gas Co.'s No. 1 Fortson is cleaning out on bottom and gassing strongly at a total depth of 6308.

The west offset to the Wright discovery well in the Wichita area of Sedgwick County, Kansas is reported a completion in the Simpson good for about 2400 barrels daily.

Texas, New Mexico, Louisiana

DAILY average pipeline runs from West Texas fields have been increased to nearly 300,000 barrels daily as compared with approximately 270,000 barrels daily at the end of May. Total capacity of trunk pipelines providing outlet for the territory approximates 380,000 barrels at present.

When The Texas Pipeline Co. begins running oil through its system from West Texas to the Gulf, later in the year, total capacity will be between 410,000 and 425,000 barrels, depending on the pump station installations made on the combination 10-inch and 12-inch line.

With tank car shipments of about 25,000 barrels daily and runs to West Texas refineries of approximately 60,000 barrels daily, the total demand for crude in the Permian salt basin region reaches roughly 385,000 barrels daily. Production of the region fluctuates between 365,000 and 370,000 barrels daily under prorating practice, although vast potentials exist in the Yates pool of Pecos county, where operators have voted to extend the present system another six months.

Field operations elsewhere in Texas, in New Mexico and in Louisiana were of routine character throughout the week.

Simplified Method of Gaging Working Barrels Shown at A.P.I. Meet

By John Power
N. P. N. STAFF WRITER

BURBANK, June 15

THE standardization work of the American Petroleum Institute; a simplified method of gaging the inside of working barrels and other small cylinders; some of the difficulties encountered by the manufacturer; and the elementals of repressuring were the topics of discussion at the June 12 meeting of the Burbank chapter of the A.P.I. Division of Development and Production engineering.

C. A. Young, of the A.P.I. and general secretary of the division told the field men present of what had been accomplished by the Institute's standardization of oil field equipment. Explaining that although most of the "inside" work had been accomplished, it still remained for the material built to A.P.I. specifications to be brought into general use in the field. This condition, said Mr. Young, could be best and most rapidly brought about by general acceptance of the A.P.I. standards by the men in the field.

The significance of the familiar A.P.I. monogram on the various kinds of material was also explained. Its use, said Mr. Young, guaranteed to the purchaser that the joint, tool, or what not that bore the monogram had been built to A.P.I. specifications in every particular, that certain service could rightfully be expected from it, and that it was interchangeable with a similar product of any other manufacturer using the monogram. Not only was it interchangeable part for part with the similar products of other make, but it could also be used as a unit in conjunction with any assembly of material, regardless of the maker.

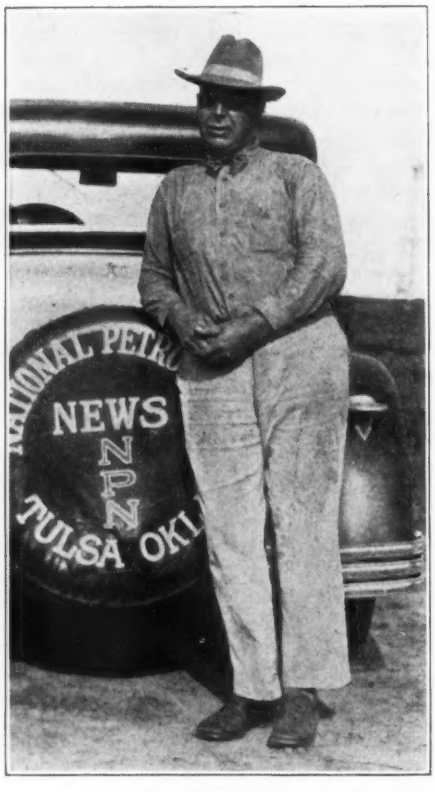
Allowances must be made for ordinary wear, however, Mr. Young pointed out. In cases where a joint of pipe had been run a few times, trouble might result from attempting to make it up with a joint on which the threads had not been subjected to use. This was, however, no fault of either the manufacturer of material, but was a natural result of the wear due to use.

Mr. Young also explained that, although the pitch of A.P.I. pipe threads was the same as that used by all manufacturers of standard fittings, the A.P.I. threads were longer, and hence would not make up all the way in a collar or other fitting not made to A.P.I. specifications.

Delay in the checking of the master gages has been the cause of leaving the monogram off many articles which, in many respects, are A.P.I. standard. Now, however, the work on the gages has about been finished, and according to Mr. Young, it should not be long until the manufacturer licensed to use the monogram will be marking his goods with it as a guarantee of dimension and composition.

Mr. Young also told of the A.P.I. booklets on the proper care and use of oil field equipment. A complete set of A.P.I. publications on material is to be furnished gratis to the various field chapters of the Division.

Many of the larger producing companies, which buy field materials in quantities, check the material supplied them carefully for irregularities of manufacture. Variations on the inside of working barrels have been found in many cases, the use of gage plugs being the most common method of checking. Although these plugs will show a barrel to be in gage at the end, places inside the barrel where the diameter is greater than that called for by the specifications can not be detected.



Fred Beiser

Repressuring foreman for the Sinclair Oil & Gas Co., and chairman of the Burbank chapter of the A.P.I. Division of the Development and Production Engineering poses by NATIONAL PETROLEUM NEWS' *field reporter's gully jumper*

A simplified means of getting a reading at any desired place in the barrel has been developed by L. B. Holland, of the Phillips Petroleum Co., and was explained by him at the Burbank meeting. A standard micrometer gage, giving readings of plus or minus .0025 of an inch is attached to one end of a small, hollow brass rod by means of a hook and plate. The plate is used nearly as a rest for the gage.

A flash light handle is used, with a small globe made up in the same end of the rod as that to which the gage is attached. The side of the rod serves as one end of the electrical circuit. A wire and spring attachment such as is ordinarily used in flash lights completes or breaks the circuit. A battery is contained in the handle.

The gage can be inserted in the barrel, and the light turned on at any desired place so that a reading may be taken. Considerable variation has been found in the interior diameter of various barrels tested.

IMPROVED control of multiple heat treating is helping the manufacturer of seats for the ball and seat combinations to make the seats with a uniform hardness. Paul H. Wendel, sales manager of the Walter O'Bannon Co., told the meeting that one of the hardest jobs of seat manufacture was rapidly being overcome, and that it was probable that the seats for ball and seat assemblies will be of the same degree of hardness throughout their perimeter. All responsible manufacturers, said Mr. Wendel, welcomed having imperfect specimens of their product called to their attention, as it enabled them to check up on their various departments.

E. H. Bennett, chief engineer of the Marland Oil Co., outlined briefly the process and expected results of repressuring. The main reason for repressuring, said Mr. Bennett, goes

back to the very "why" of flowing wells. It is the energy in the gas which makes the wells flow originally, and, when this energy is gone, due to the depletion of the gas, it must be replaced either through the medium of a pump, or through the re-introduction of gas or compressed air.

Experience, said Mr. Bennett, has taught that the old method "Blow her down till the oil comes" is not only wasteful of the gas itself, but an uneconomical method of producing oil. The present program, which is to "shut her in, and make the oil come" will more than justify itself in the increased recovery from the sand.

One thousand cubic feet of gas, at 500 pounds pressure, equals one horsepower, said Mr. Bennett. When the millions of cubic feet of gas contained in the ordinary oil sand are wasted, it is not difficult to see how much work energy has been thrown away, and how much must be done to restore that energy.

In spite of the corrosion problems which the use of air for repressuring present, air is the preferable repressuring medium with which to start, said Mr. Bennett. His reason for the choice of air lies in the fact that its course is easily traceable from well to well by the use of oxygen analysis, making it easy to choose the key wells, in addition to furnishing data as to drainage between wells.

One of the chief reasons for the value of repressuring as an aid to production lies in the nature of oil sands, said Mr. Bennett. One cubic foot of sand, broken down and flattened out would cover more than 1000 square feet. The oil adheres to the sand grains, but with gas in suspension in the oil, the fluid is kept lighter and less viscous, and therefore moves more freely through the sand body. And, therefore, less energy is required to move the oil in this condition.

Repressuring, from the practical standpoint is also possible without unit operation. This is done by balancing the key wells, gas or air being admitted to wells on both sides of a property line until the pressures built up are equal. With equal pressures there can be no migration of oil either toward or away from either lease.

Although repressuring has proven itself more effective in sand than in lime production, some repressuring has given beneficial results in lime production in Texas. It has retarded water encroachment, and has undoubtedly helped to prevent the water by-passing the oil in the pay formation.

It is probable, said Mr. Bennett, that repressuring will increase production from one to three times over the life of a well.

Requa's Coercion Statement Criticized in Congress

WASHINGTON, June 17

"LITTLE reaction has yet been shown in Washington to the developments of the Colorado Springs conservation conference, but that little has been unfavorable. Mark L. Requa, spoken of as the personal representative of President Hoover, came in for criticism at the hands of Senator Cutting (Republican) of New Mexico, on June 11 for having ruled out, at the conference, a resolution calling for a recision of President Hoover's order forbidding the issuance of permits to explore the public lands for oil and gas. Requa was also criticized for his declaration that if, after the government made voluntary regulation possible, the oil industry did not accept the opportunity, then "no one will be more insistent than myself in urging rigid government coercive regulation."

Mr. Requa did not like the criticism so he sent Senator Cutting a telegram setting forth the part of his address of which the quoted words were a part. The telegram showed that Mr. Requa favored coercion only if the opportunity of voluntary regulation was not accepted. Mr. Requa, in his telegram to the New Mexico senator said, "Might I ask as a matter of simple justice that you read this paragraph into the record?"

Senator Bratton, (Democrat, New Mexico) not only had the telegram read into the Congressional record but made it the occasion for calling attention to the fact that Mr. Requa had nothing to say about what he said was the principal part of his remarks, namely, the ruling that a resolution having to do with the President's order closing the public lands to exploration, was out of order. Senator Bratton said that any one who compared the Associated Press dispatch, upon which he based the little he had to say about coercion, would find the press dispatch and Mr. Requa's telegram to be verbally identical.

"I, therefore, do not feel that I have anything to retract" said the New Mexico senator, "What criticism of Mr. Requa may have been implied in what I said was based not only on the threat of coercion but upon the fact that he, as chairman of the conference, declined to allow the discussion of a resolution backed by most of the Rocky Mountain states questioning the order made by the Secretary of the Interior last March."

"In regard to the point to which the senator has just referred, that is not covered in the telegram at all, is it?" asked Senator Borah, of Idaho.

"No, Mr. Requa does not mention that. I have information—I do not know whether it is correct or not—that on the second day of the conference Mr. Requa reversed his ruling of the first day, but my feeling is that the harm had already been done. As most senators are aware, the conference collapsed yesterday without accomplishing any result whatever."

Having in mind the long years spent in trying to get an interstate compact about Boulder Dam, Senator Cutting said he was sure the senators from California and Arizona, especially, realized the extreme difficulty of getting a conference of states to agree on any form of interstate compact even when promoted under the best possible auspices.

"My feeling is that to begin a conference of that sort with talk about coercion" said Senator Cutting "even though it may be hypothetical coercion to be employed in the remote future, and at the same time to rule out of order a phase of the question that is vital to about half of the states engaged in the conference is, to put it mildly, somewhat of a tactical error.

"I want to say, however, that I agree with one statement made by Mr. Requa, namely that 'there are two schools of thought concerning permissive and coercive procedure.' In dealing with sovereign states I belong to the school of 'permissive procedure,' or, perhaps, it might be still better expressed as 'persuasive procedure.'

"I hope that, after the rather ignominious collapse of the Colorado Springs conference, Mr. Requa may become a convert to that school of thought."

National Refining Director Dies

CLEVELAND, June 15.—Charles E. Kennedy, director of the National Refining Co., here, died at his home in Cleveland June 12 at the age of 73 after a long illness.

Mr. Kennedy was formerly editor of the Plain Dealer, Cleveland morning newspaper. For the past 20 years he was in the advertising business, and until his last illness, was head of the advertising department of the Telling-Belle-Vernon Co., milk distributor. He was director of the National Refining until the time of his death.

During his newspaper career, which was a long one, Mr. Kennedy trained many now well known writers. Among them was Charles T. Henderson, now advertising manager of the East Ohio Gas Co., Cleveland.

One daughter, Winifred, survives Mr. Kennedy.

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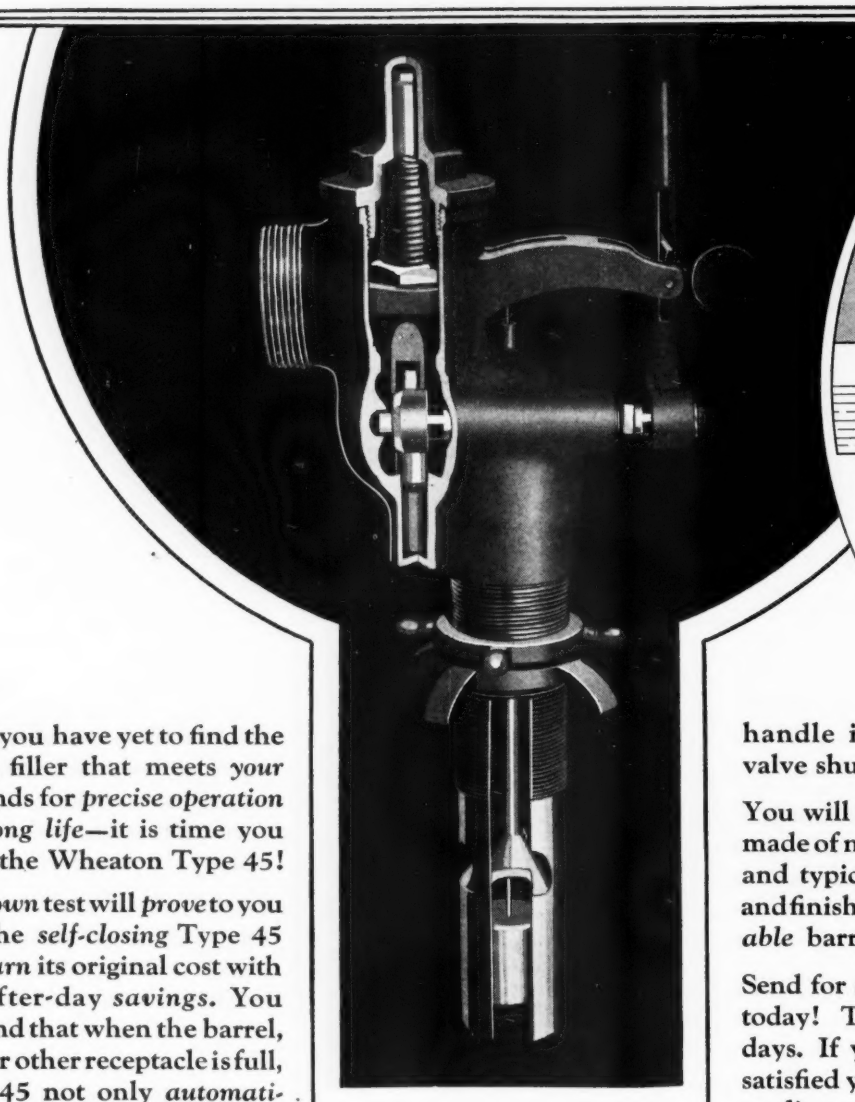

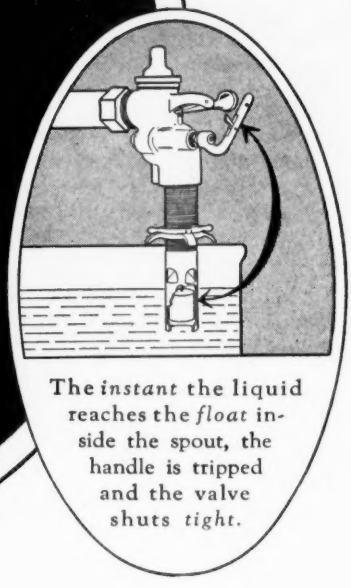

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For a Sliding Tariff on Petroleum To Vary With Market Needs

By Wirt Franklin*

Presented before Conservation Conference, Colorado Springs, June 12

COLORADO SPRINGS, June 14.

A TARIFF on crude oil and refined products, of not less than 50 cents a barrel nor more than $1 a barrel, was advocated before the Conservation Conference here, as the first conservation measure it should consider, by Wirt Franklin, independent operator of Ardmore, Okla.

It should be left discretionary with the president, upon recommendation of the tariff commission, as to what the tariff should be within the above limits, said Mr. Franklin. Whenever domestic production declines to the point foreign oil is needed to supply markets here, the tariff should be lowered to 50 cents a barrel. When domestic production again meets demand the higher limit in the tariff should become effective again.

A tariff is necessary if the 250,000 small wells in the country are to be kept producing, said Mr. Franklin. Otherwise they will be abandoned because their operation, under present prices, is unprofitable to their owners.

Mr. Franklin spoke as representing the Southern Oklahoma Oil & Gas Association and interests of smaller producers generally.

John H. Rebold, independent operator of Oklahoma, also spoke on behalf of the tariff, representing the Okmulgee District Oil & Gas Association. He did not present a prepared statement, as did Mr. Franklin, but spoke extemporaneously.

I REPRESENT and speak in behalf of the small operators of southern Oklahoma, engaged in the production of oil, some times erroneously referred to as independent producers, a misnomer because there is no class engaged in productive enterprises more dependent than the small oil producer—dependent because he must of necessity drill his wells to prevent his land from drainage and sell his oil at the posted price, whatever it may be at the time, whether remunerative or not, to the major purchasing agencies.

At the outset I desire to correct the mistaken idea in the minds of many members of this conference that there now exists an overproduction of oil in Oklahoma, for as a matter of fact Oklahoma is now produeing much less oil than the market demand for oil in that state. I am reliably informed that more than 50,000 barrels per day is being taken out of storage to supply that demand and every oil field in the state is producing at the present time at its maximum capacity.

We are met to confer and discuss a compact or agreement among the states, as I understand it, looking toward the conservation of crude oil. In that connection it is pertinent to inquire what is conservation. The question of what conservation consists of is varied but is generally understood to be the prevention of waste, actual and economic, and the prevention of the wasteful utilization of oil. As President Coolidge has well said, a low price for crude oil tends to encourage the uneconomic and wasteful use thereof. Therefore, the consideration of this problem cannot be divorced from a consideration of the price at which crude oil is sold.

How then may conservation of crude oil be accomplished? It must be admitted that a proper utilization of the oil produced cannot be considered as waste and that we are entitled to produce as much oil as market demands require and when it appears from time to time that the production of oil in any given area exceeds the reasonable market demand therefor the production thereof should be controlled.

In my opinion by far the best method of controlling production is by securing an agreement among operators in any given pool, immediately after discovery of oil, for an orderly development of the pool by the proper spacing of wells over the supposed geological structure in such a manner as to produce the oil from that pool over a long period of time instead of, as in the past, allowing a wild orgy of drilling to be brought about, bringing the oil from that pool to the surface in a few months thus bringing chaos to the industry. The most glaring example of this, in Oklahoma, may be found in the comparatively recent development of the greater Seminole area. If orderly development cannot thus be had by cooperative agreement the next best method is by proration of production from flush fields, reducing the amount of oil allowed to be taken from the ground to the reasonable market demand within a given area.

In this connection I would call attention to the oil and gas conservation laws of the state of Oklahoma which were passed in 1915, shortly after the producing industry had been thrown into chaos and confusion because of great flush production from the Cushing and Healdton fields. I would remind this conference that the original conservationists in the oil industry were the small producers of Oklahoma. The two laws in question were written and presented to the legislature of Oklahoma by representatives of the Southern Oklahoma Producers Association, by representatives of the Southern Oklahoma Oil and Gas Association (formerly called the Ardmore Producers Association), the Okmulgee District Oil and Gas Association and the Bartlesville-Nowata Oil and Gas Association.

At the time these laws were presented to the legislature they met with the concerted and determined opposition of the major pipe line and purchasing companies, the very interests which, during the past two years, have claimed to be the originators of conservation. Jurisdiction under the Oklahoma law, as is well known, is conferred upon the corporation commission of that state to enforce and carry out the provisions of the oil and gas conservation laws. By rules and regulations which may be adopted by the commission it is now possible, if the law is enforced, to control the production of oil in Oklahoma in such manner as to prevent the bringing to the surface of more than the reasonable market demands.

The representatives of the Southern Oklahoma Oil and Gas Association have come to this conference in a spirit of cooperation, with a desire to lend their support and influence to any reasonable method which may be worked out looking to the production of oil in a sane orderly manner under

*Mr. Franklin is an independent operator with headquarters Ardmore, Okla. His company is the Wirt Franklin Petroleum Corp. He represented the Southern Oklahoma Oil & Gas Association before the Colorado Springs conference and spoke on behalf of independent producers generally.

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conditions that will not constitute waste, actual or economic; but any plan agreed upon must contain safe guards which will make it impossible for tyranny, oppression and confiscation to be practiced.

In view of what has been said in this conference by preceding speakers we are fearful that, in the name of conservation, a compact may be initiated and presented for adoption vesting such absolute authority in a commission which might fall under the domination of the major factors of the industry and which commission, once established, could restrict domestic production to any extent it might desire on the ground that it might be necessary, as a matter of national defense or otherwise, to save our own oil for future use, allowing the domestic demand to be satisfied and filled by the importation of foreign oil.

IF THIS condition should be brought about it would mean the annihilation and destruction of the small producer of crude oil. His property would become valueless and he would be compelled to sell it at any price it might bring in a market thus demoralized. Therefore, it will be seen by the conference that any plan which may be submitted must contain such checks and safeguards as to prevent the possibility of the occurrence of such a catastrophe to the small operator as I have outlined.

I wish to confirm and approve what Mr. Pat Malloy has said to this conference as chairman of the delegation appointed by the Governor of Oklahoma, and more especially his reference to a restriction upon the importation of crude oil. I wish to go further and say that the very first measure of conservation which should be adopted is the restriction of the importation of oil by the adoption by Congress of a tariff on crude oil and the refined products thereof of not less than $.50 nor more than $1 per barrel.

It should be left discretionary with the President, upon recommendation of the tariff commission, as to what such tariff should be from time to time, depending upon the need for oil in the domestic market of the United States. Whenever the domestic production has declined to a point where foreign oil is needed the tariff could be lowered to $.50 per barrel, allowing foreign oil to come in until such time as the domestic production might again equal the domestic demand therefor. Then the tariff could be increased by executive order as the facts at the time would justify.

In offering this suggestion I do so as a conservation measure. I insist that it is germane to the discussion of conservation and that it ought to be the first measure adopted in any conservation program. I cite for your consideration in this connection the fact that yesterday Mr. Requa, the chairman of this conference, stated that there are now 250,000 wells in the United States producing an average of one barrel per day. It is certain that these wells have been operated for the last three years at a loss but nevertheless operated by the owners in the hope that the overproduction menace might soon cease and these wells again become profitable.

How much longer can the owner of these wells continue to operate them at a loss? Certainly not indefinitely. Still it is admitted that these small wells are the backbone of the oil industry—its very life blood. Their abandonment because they are unprofitable would be the most serious blow to conservation which could be imagined. Once abandoned it would never be profitable in the future to again drill wells to the same sand from which they are producing and this vast amount of production would be lost forever. A tariff of $1 a barrel on oil will save these wells for their owners and save 250,000 barrels of oil per day for the domestic consumers in the United States.

Opponents of a tariff on oil will say that it cannot be enacted into law because the consumer, the buyer of gasoline, will be adversely affected. I would say, in answer to that, that the consumer of gasoline has not received the benefit of the low price of crude oil in the last three years. The price of gasoline to the consumer has not fluctuated in proportion to the price of crude oil, but the burden has fallen upon fuel oil, the price of which has been reduced in the Mid-Continent area to as low as $.50 per barrel. This cheap fuel oil, coming into competition with coal, has thrown that great industry out of joint and thousands and thousands of miners out of employment.

The beneficiaries of this cheap fuel oil have been the manufacturing industries of the east and of New England which are very loud in their protests against a tariff on oil, but which themselves depend upon a high protective tariff without which they could not exist at all. These industries are anxious to continue the present policy of free importation of low grade oil suitable for fuel. As I have said before the consumer of gasoline does not receive the benefit thereof but, nevertheless, the loss is passed on to the producer of crude in the shape of a low price for his crude oil.

THE major companies have not suffered to any appreciable extent because of the low price for crude oil. On the other hand the executives of some of these companies have stated in some of their public statements sent to stockholders, said statements being published in the Wall Street Journal and other financial papers, that their great and unusual profits for the year 1928 had been occasioned by the fact they had been able to buy cheap crude oil in Oklahoma and Texas and at the same time had marketed the refined products, with the exception of fuel oil, at about the same price as before.

I believe that American markets for crude oil should be kept for American producers of crude oil. There is no argument against a tariff on crude oil that cannot be made against a tariff on anything else, for instance, why should we not conserve iron? It is indispensable to national defense. Why not remove the tariff on iron and steel products, allowing their free importation from England, France and Germany, and save our own iron ore safe in the mines for that future time when it may be needed? Why not in truth, save all our natural resources, the products of our mines, lead and zinc and all the rest and import from foreign countries our requirements thereof?

AGAIN the argument is made against a tariff on oil that it cannot be adopted because it is a vital necessity to the entire population of the United States. Still we have a tariff on wheat, sugar and beef and many other articles of like importance and what is of more vital necessity to every man, woman and child in the United States than bread and meat?

If then the advocates of a compact among the states for the conservation of crude oil are in good faith let them without further delay agree upon the conservation of oil from the 250,000 wells which average only one barrel per day by joining us in the advocacy of a tariff on crude oil and refined products. This one thing adopted would do more to conserve oil than all the efforts put forth in the last three years in all the fields of the United States.

I cannot refrain from commenting on the bugaboo of the exhaustion of our oil resources which has again been brought before us. Again the prediction has been made by gentlemen of high authority and standing that the next decade might see the exhaustion of our reserves of oil to such an extent as to impair our national safety.

Our stores of oil in the ground in the states now producing, I venture to predict, will furnish sufficient oil to meet all requirements for an indefinite period to come. It is true that deeper drilling will have to be resorted to. It will cost more to bring the oil to the surface but, in my opinion, the surface has only been scratched and more oil will be produced in Oklahoma and other states of large production by deeper drilling in the future than has been produced in the past, and again we are continually finding new pools.

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PIPE FOR ALL PURPOSES

Big Gas Volumes at High Pressure Delay Oklahoma City Wells

By John Power
N. P. N. STAFF WRITER

TULSA, June 15

ALTHOUGH it has seemed for a week or more that each day would shed some light on the possibilities of Oklahoma's two most promising areas, neither the area north of the Pearson Switch-St. Louis pools, nor the Oklahoma City pool have turned in what may be regarded as definite completions.

The performance of the Simpson in the former has been so satisfactory that, with one exception, the new wells in this area have been stopped in this formation on top of the Wilcox. Fishing jobs continued to crop up over Oklahoma City way in sufficient numbers to prevent the completion of the wells nearest the deep pay.

There are two parts to the play going on north of the St. Louis-Pearson Switch area. What has so far appeared as the most important is a northeast extension to the Pearson Switch pool, where the Magnolia Petroleum Co. and the Independent Oil & Gas Co. have completed wells in the Simpson for better than 1000 barrels daily.

The application of the air lift to the Independent well in the NW of 16-7-4 resulted in a production increase from 1500 barrels daily to 3300 barrels, enough to satisfy the operators for the present. The real hopes for the future of the locality are, however, not founded on Simpson production, but on Wilcox.

Color to the theory of possible Wilcox production underlying the present Simpson area is given by incomplete reports from another well of the Independent's in the SW NW NW of 1-7-4, about three miles northeast of the well in section 16. This is the No. 1 Barrows, which at 4224 feet made a flow of 104 barrels of oil an hour. At the end of the first hour, the well was shut in to await pipe line facilities.

Opinion differs as to the formation from which the oil came. The Simpson was topped at 4165 feet, with but little oil, most of which was coming from the Hunton lime above. The nature of the formation continued dolomitic to the present total depth, but whether the oil came from a soft spot in the Simpson, or from the top of the Wilcox is not known.

Drilling ceased immediately when the oil began to come, and no samples of the formation were taken. It is expected that the well will be cleaned out and drilled deeper early in the week.

The new well is in the area opened by the Hunton lime well of Martin, Irwin et al. several weeks ago. This well, in the SE NE NE of 2-7-4, showed itself a producer good for better than 1000 barrels daily at the time of its completion.

By agreement at the time the well was started, discovery rights were waived, the well being shut in to 100 barrels daily until the first offset was completed. The shut in was complete six days a week, the well being opened enough on the seventh day to make 700 barrels. No loss of pressure or willingness to come back after being shut in was noticed in the Martin well.

The new well of the Independent's, the No. 1 Barrows, is a diagonal offset to the Martin, Irwin et al. No. 1 Kelly. Several wells are in, or about in, close to the discovery. The south offset, the Phillips Petroleum Co. No. 1 Grace, topped the Hunton lime at 3870, but at 20 feet in had only a show of oil.

Martin, Irwin et al. No. 2 Kelly, north offset to the discovery, has made two flows of 65 barrels from a depth of 3840, after topping the Hunton at 3792. Several of the drilling wells are about to reach the Hunton, but, if the Independent's No. 1 Barrows should be proven in the Wilcox, it is likely that the wells now drilling for the Hunton lime production will be carried down to the Wilcox.

SO FAR as the production north of the Pearson Switch pool is concerned, it is expected that the operators will first exhaust the Simpson production before carrying any of the present producers to the Wilcox. An unsatisfactory well in the Simpson, will, however, be a strong temptation to the owners to explore just a little deeper. It was in this fashion that the original St. Louis pool was discovered.

The best production, in the Pearson area appears to run northeast from the Magnolia Petroleum Co. No. 1 Latimer, the discovery well, toward the Independent's No. 1 Rhodd, a mile or so to the northeast. This latter is the well in which the air lift is doing so splendidly. For those to whom there is a significance in "trends," the Magnolia, well and the two Independent wells are in something approaching a lime running northeast-southwest through Twp. 7N-4E.

Life has been just one darn thing after another over at Oklahoma City, so far as the Capital's oil field is concerned. The tremendous volumes and high pressures encountered with the gas found in the top of the lime at about 6100 feet have complicated the completions of all the wells close enough to the 6400 foot pay to be "hot."

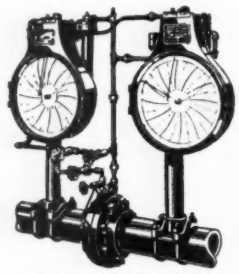
THE well closest, apparently to being the second producer of the field, has again been delayed by fishing jobs. It is the Sinclair Oil & Gas Co. No. 1 Stampner, in the NE SW NW of 30-11N-2W, which has been fishing, off and on, for a week, with 3000 feet of oil in the hole. The tools have been recovered twice, and lost again both times.

The Mid-Kansas Oil & Gas Co. also has a well almost completed in the Oklahoma City pool. Its No. 2 Fortson is about ready to start bailing, after having set pipe at 6200 feet. The well is in the CNW NE of 24-11N-3W. The company's No. 1 Fortson, in the CSW NE of the same section, is shut down to await developments in the No. 1.

When shut down, the No. 1 was cleaning out four feet off bottom (6308), and making about 3,000,000 cubic feet of gas per day. The discovery well is still making a lot of oil, though water continues to increase. The last 24 hour gage showed 2518 barrels of oil and 600 barrels of water.

Rumors about the Asher district flew thick and fast during the week. Some said the whole district had gone "haywire," others had it straight that the Hall & Briscoe test northwest of the discovery was flowing over the crown from the Wilcox, after having run exceedingly low on the Viola lime, from which comes the field's production. Both reports were, to put it gently, exaggerated.

The pool's seven wells continue to have a combined daily output of about 9500 barrels, and the Hall & Briscoe test, is, apparently, still a dry hole.



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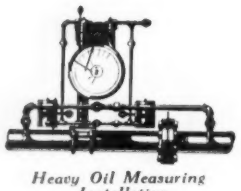
Installation for Measuring Water or Light Oils—2½ and 8 Pipe Diameter Connections



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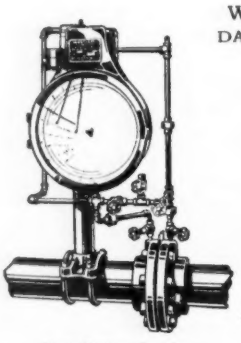
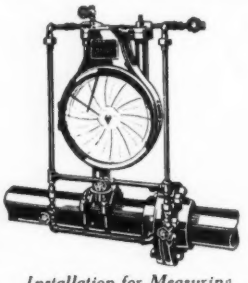
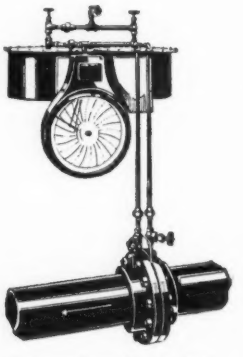


Installation for Gas (Flange Connections)



Installation for Measuring Water or Light Oils (Flange Connections)



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A rainbow of oil did show up through the hole full of water encountered in the Viola, but whether this came from the Wilcox or not could not be learned.

The showing did have this much importance, however. If this well, low as it was, carried a showing of oil in the Wilcox, it lies entirely within the realm of possibility that the discovery well and its neighbors to the south may prove to have commercial production in the deeper formation. They lie considerably upstructure from the dry hole, based on depths at which they topped the Viola.

The Hall & Briscoe well is on an Asher town lot, in about the SE SW SE of 18-6-4, a little over a quarter of a mile northwest of the discovery well of the Simms Oil Co. in the SE NE NE of 19-6-4. The No. 2 Laster of the Simms, north offset to the discovery, although reported lower structurally than the No. 1, it is drilling at 3720 with 3000 feet of oil in the hole after topping the Viola lime at 3654.

Notes on the Week

Kansas registered little change during the week. The area around the Shell Petroleum Corp. Lygrisse well, known as the Greenwich pool, is attracting the most attention in the Sedgwick county play. This pool is about nine miles northeast of Wichita.

* * *

J. S. Cosden et al have the farthest southwest producer in the Roxana pool of Logan county, Okla. Their No. 1 Gardner, in the NW NE of 31-19N-4W, started making about 40 barrels an hour from a total depth of 5750 feet, and was shut down for orders. The production is reported to be from lime, and not from the regular Wilcox horizon of the field, which is found at around 6000 feet.

* * *

The old Sayre pool in Beckam county, Okla. which produced some good gas wells in its day, found another one during the past week. E. L. Martin, et al. in the CSE NW NW of 27-9N-23W having a gasser good for about 70 million cubic feet per day in the Permian pay topped at 2624 and drilled through at 2634. The gas has a rock pressure of about 900 pounds.

* * *

Production from the Seminole area continues to hang around 375,000 barrels daily, the gage for the district for the 24 hours ending 7 a.m. June 15 being 374,598 barrels from 1942 wells.

CLEVELAND, June 15.—C. F. Braun & Co. announces the opening of a sales and engineering office in the Russ Bldg., 235 Montgomery street, San Francisco. Milton H. Roths will be manager. A trained staff of engineers will be available for engineering surveys and to submit quotations on Braun products.

Back Pressure on Pumping Wells In Seminole Found Helpful

SEMINOLE, June 17

MAINTAINING and controlling back pressure on pumping wells has been found a material aid to production in the Seminole field. It was the establishing of this fact which proved of chief interest to the superintendents and foremen gathered at the regular monthly meeting of the Seminole chapter of the American Petroleum Institute Division of Development and Production Engineering, held the evening of June 11 at Seminole.

Although "Repressuring at Seminole" had been selected as the topic for the evening's discussion, the lack of sufficient data at the present time, coupled with the general interest in the results obtained by the use of back pressure on the pumping wells, combined to make the latter subject the one of chief interest.

The meeting, over which presided Morgan Walker, of the Amerada Petroleum Corp., advisor of the Seminole chapter, was attended by more than 100 field men. It was considered the best meeting held so far from the standpoint of both numbers and representation of attendance.

The most of what little repressuring work has been done in the Seminole area has been undertaken by the Indian Territory Illuminating Oil Co. So far, this has been confined to one unsuccessful experiment in the Seminole field. A light well was used as an input well, but no apparent results were recorded in the production of the adjacent producers.

The holding of back pressure, has, however, been more productive of results. In some instances overall, or daily average production for a period of time has been increased as much as 40 per cent. In one instance, described by Herbert Schaffer, of the Pure Oil Co., a well was increased from four barrels hourly to six and one-half barrels hourly.

Casing heads are closed in, and in some instances, more gas has been admitted. Pure Oil Co. has been conducting some experiments with an intermitting injection of gas, but as yet this particular phase has not been carried on long enough for any definite data to be gathered. Back pressures, which are carefully controlled, have been built up to as high as 80 pounds.

The increase in production is mainly attributed to a decrease in downtime. In the pumping of wells of the depths of those at Seminole, the rods are under a great strain, break frequently, and therefore cause the shutting down of the well. The building up of pressure on the pumping wells makes the load lighter that the rods have to lift, by revivifying the oil. And lighter loads naturally prolong the active life of the sucker rods.

Herb Schaffer

District foreman for the Amerada Petroleum Corp., and Chairman of the Seminole chapter of the A.P.I. Division of Development and Production Engineering

Weighing the wells has also come in for considerable attention, particularly from the Gypsy Oil Co. and the Pure Oil Co. A definite picture of the load at various times during the pumping cycle has made it possible for more accurate counterbalancing to make easier the job of the sucker rods.

Some discussion as to the relative merits of the 8-thread 8¼-inch casing compared with the 10-thread pipe of the same size also took place. The majority of those field men present appeared to favor the 8-thread ends as they could be run oftener, and were less easy to burn. Eight threads to the inch do not cross thread as readily as the 10-thread type, which makes for faster handling.

Proponents of the 10-thread type said, on the other hand that these difficulties could be overcome by more careful supervision of the handling of casing strings.

The recovery of a considerable length of pipe from wells being abandoned was also reported at the meeting. Instead of running the casing ripper or collar buster at the point of vibration, more salvage has been obtained by ripping the pipe at a point just above the top of the cement behind the pipe, and establishing circulation. With circulation established, recoveries of 2000 and 3000 feet of pipe during the abandoning of wells has not been unusual.

New Small Well Fields Found in Texas

HOUSTON, June 15.—New developments in small well territories of Texas will result from oil discoveries drilled in Foard, Cooke and Shackelford counties.

In Foard county, one mile north of Thalia, in the G. C. & S. F. survey, the Shell Petroleum Corp. completed its No. 1 Tarver, making 170 barrels, initial production, in gray lime pay at 2014-2024 feet. Humble Pipeline Co. is connecting with the well through a 4-inch lateral built to its Wichita Falls district system.

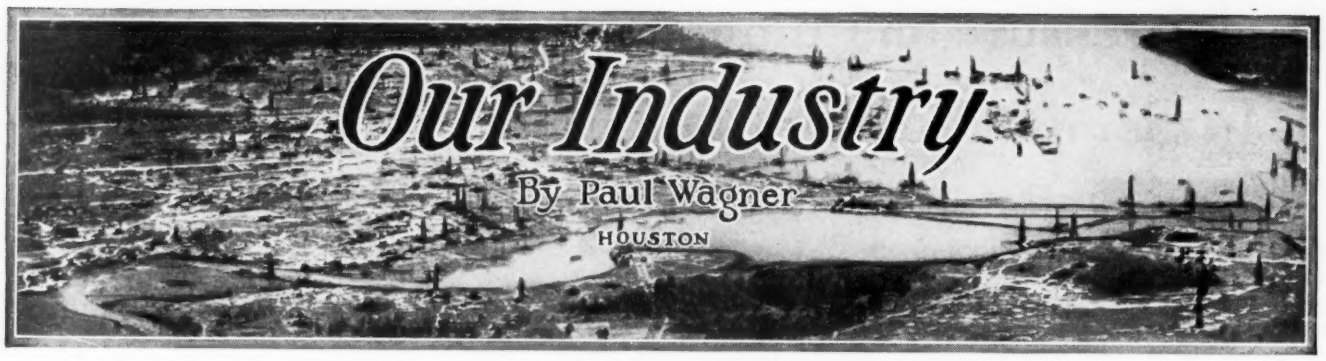
Two miles northeast of the town of Muenster, Cooke county, the American Refining Co., and Benson Brothers, drilling No. 1 Haverkamp on the east 105 acres of the H. N. Burditt survey, got a 35 barrel well in sand pay at 753-760 feet. The well is in wildcat territory.

Oyster & Rife et al. opened a western Shackelford county pool with completion of their No. 1 W. Y. & R. A. Davis, in Sec. 15, Texas & Pacific survey 14, estimated good for 50 barrels daily in sandy lime topped at 1604 feet. The well is a mile and a half south of the small Harvey pool and two miles west of Davis ranch development. Humble Pipeline Co. is extending its gathering system to the well.

Promoter Indicted on Libel Charge

HOUSTON, June 15.—C. D. Neff, Dallas promoter, was indicted on a charge of criminal libel in a bill returned by the Dallas county grand jury, June 14. Neff was said to have written a letter to Representative George Purl accusing officials in charge of administering the Texas "blue sky" law at Austin. An investigation was made by the legislature recently and the officials cleared. State officials testified before the grand jury.

Neff was complainant in a suit brought early in the year against the state treasurer of Texas and others, asking damages exceeding $1,000,000 because of a company with which he was connected being refused a permit to do business in Texas. The suit was dismissed by court order when called for trial.



An accompanying picture of two members of the Pew family shows at the left, John G. (Jack) Pew, of the land department, Sun Oil Co., Dallas, and Tom W. Pew, assistant to E. J. Gorman, vice-president of the subsidiary Twin State Oil Co., Tulsa. Jack Pew is a son of J. Edgar Pew, vice-president and general manager of the Sun's producing activities throughout the southwest. Tom Pew is a son of John G. Pew, president of the Sun Ship Building & Dry Dock Co., Chester, Pa. He is a graduate of the mechanical engineering department of Cornell University.

* * *

James Terry Duce, formerly consulting geologist attached to New York headquarters offices of The Texas Co., now is manager of The Texas Petroleum Co., a subsidiary, operating in Venezuela and Colombia. Other changes in The Texas Co. geological organization include appointment of George W. Schneider as division geologist at Shreveport, for Louisiana, succeeding F. J. Miller, resigned; and appointment of R. S. Powell as Wichita Falls division geologist. Mr. Powell succeeds Fred C. Sealey, recently appointed assistant manager of the South Texas division with Houston headquarters.

* * *

T. F. O'Brien, gas and water superintendent of The Texas Co., in the Breckenridge district, has been assigned repressuring work and its general supervision in central north Texas. His headquarters have been transferred from Parks, Stephens county, to Cisco.

* * *

H. W. Whitworth has been appointed manager of the order and distribution department of the Standard Oil Co. of California at San Francisco. He was formerly acting manager.

* * *

Announcement has been made by D. C. Norcross, president of the Petroleum Rectifying Corp., organized under the laws of Delaware, that it has acquired 100 per cent of the capital stock of the Petroleum Rectifying Co. of California. The business will continue under personal direction of Mr. Norcross and others who have been associated with him a number of years. It has been in successful operation since 1911, when it was first established. The company is engaged in electrical dehydration of crude oil emulsions under patented processes.

* * *

C. D. Johnson, geologist, and C. E. Schoenfelt, engineer, announce the incorporation of Petroleum Information, Inc., with offices in the Continental Oil Co. building, Denver. They are offering a complete service for the independent company or operator who does not maintain scouting, geological, engineering or land departments.

* * *

A. D. Oden, formerly of the Louisiana Oil Refining Corp., Shreveport, has succeeded V. J. Tuley in the sales department of the Sinclair Refining Co., at Houston. Mr. Oden is assistant to John R. Herr, district sales manager. Mr. Tuley is now located at 641 Gibbons street, Los Angeles, representing the Union Petroleum Co., controlled by Sinclair, on the Pacific Coast.

* * *

L. L. Purkey is now sales auditor of the Standard Oil Co. of California at San Francisco, succeeding J. MacPherson, assigned to other duties.

John G. (Jack) Pew and Tom W. Pew

E. M. Stilwell was advanced to the position of assistant sales auditor, vacated by Mr. Purkey.

* * *

W. G. Wender is now maintaining headquarters at Cisco, Texas, where he is associated with J. A. MacDonnell, Independent oil operator of Lima, Ohio. Mr. Wender formerly represented Amerada Petroleum Corp., at Cisco, as a geologist.

* * *

Walter Morrison, purchasing agent of the Simms Oil Co., is now president of the Dallas Association of Purchasing Agents. He is charter member of the organization and one of the best known purchasing agents in the southwest. B. R. Newberry of the Lone Star Gas Co., retiring president, becomes a national director of the association. N. F. Nyegaard, assistant purchasing agent of the Lone Star, is a member of the executive committee.

* * *

Safety should be sold to the new employe the first day he starts his job, whether it be "cash" or whether it be in "installments," according to F. M. Tillou of the Bayonne terminal of The Texas Co. Mr. Tillou states his belief that aside from what the employment man tells the employe it should be the duty of his new foreman to instruct him in the company's way of Safety. He feels that "if the new employe starts his work with the thought that the management does not, or will not, consider him a good worker unless he proves that he is also a SAFE worker, we can look for good results immediately."

* * *

Stanley Jay, veteran West Texas geologist of the Pure Oil Co., has been transferred to the San Antonio district. Jay was one of the first geologists to become active in the Permian salt basin region after the Big Lake field discovery well was drilled in 1923.

* * *

R. N. Slingerland, acting traffic manager, has been appointed traffic manager of the Standard Oil Co. of California, San Francisco, succeeding S. G. Casad, retired. Mr. Casad was connected with the Standard for 27

years. He was engaged in railroad work until June 1, 1902, when he joined the company from whose ranks he recently retired.

* * *

Whenever one goes flying around Southern California he is apt to find that the personnel "taking the air" represents widely diversified oil interests. Such was the case at Ventura, California, recently, when the conductor of this department snapped an accompanying group picture. From left to right are shown: Donald E. Dickey, assistant engineer of tests, General Petroleum Corp., subsidiary of Standard Oil Co. of New York; Charles Kifer, Ventura division superintendent, Shell Oil Co. (California); John E. (Brick) Elliott, president, Elliott Core Drilling Co., owner of the airplane; F. E. Rehm, assistant general field superintendent, Shell Oil Co., Los Angeles; B. W. Gillespie, Elliott Core Drilling Co.; Glenn H. Bowlus, engineer of tests, General Petroleum Corp.

Donald E. Dickey, Charles Kifer, John E. (Brick) Elliott, F. E. Rehm, B. W. Gillespie and Glenn W. Bowlus

C. S. Fisher, R. B. McGuire and W. L. Todd

* * *

District Gauger C. C. Harrolson of the Wichita Falls division has "hung up" a record of accuracy described by The Texas Pipeline Co. management as perfect for two consecutive years. In that time, Harrolson has maintained a score of no errors on any run ticket. In the year 1928 he handled 5740 runs. Leo Jeanis of the Fort Worth division and J. G. Duval of the Wichita Falls division also had perfect scores in 1928.

* * *

When the Simms Oil Co. recently made its Asher field discovery, about 25 miles south of Shawnee, it was C. S. Fisher, Oklahoma division production superintendent, who got credit for a successful wildcatting enterprise. Mr. Fisher is shown at the left in an accompanying group picture of Simms production heads. In the center is R. B. McGuire, central west Texas superintendent. At the right is W. L. Todd of Dallas, production vice president.

* * *

J. B. O'Brien, manager of the Compania de Petroleo de Transcontinental, S. A., subsidiary in Mexico of the Standard Oil Co. of New Jersey, is chairman of the Fourth of July committee handling the forthcoming celebration at Tampico. Mr. O'Brien has spent years in the Transcontinental's service there. He was assistant manager in the administration of J. A. Brown as resident vice president. Later, he was in the foreign service of the Standard in the Dutch East Indies before returning to Tampico as manager.

* * *

Generally oil scouts are masculine, but not always. There are at least two exceptions, one in Los Angeles and the other in Fort Worth. In Los Angeles, Miss K. H. Wilson qualifies as chief of the scouting department of the Richfield Oil Co.; at Fort Worth, Miss Louise Pilcher is office assistant to the chief scout of the Pure Oil Co., Paul R. Martin.

Vernon L. King, formerly a geologist for The Texas Co. of California, has opened consulting offices at 1238 Subway Terminal building, Los Angeles.

* * *

R. G. Hinley, formerly district foreman at Cleveland, Okla., is the new Panhandle division superintendent of the Prairie Pipeline Co., succeeding Fred Thilenius, who resigned to join the Prescott Co., manufacturers of Menominee pumps. Mr. Thilenius makes Tulsa headquarters. W. E. Brandenberry succeeds Mr. Hinley and L. B. Smith of Independence, Kan., succeeding Mr. Brandenberry as chief gauger.

* * *

Patrick Hill, vice president in charge of Texas operating headquarters of the Rector Oil Co., has transferred his offices from Midland to 1610 Electric building, Fort Worth. George T. Abell, chief geologist, continues to maintain a field office at Midland.

* * *

The behavior of a cement highway between McKittrick and Taft, Calif., is the subject of interesting comment by J. B. Stevens, assistant petroleum engineer of the Associated Oil Co. About a quarter of a mile strip near the McKittrick end is the only part of the highway subject to criticism after being in service about 10 years. There, the pavement is broken into small, irregular blocks, forming cracks which open as much as a half inch before being filled in with tar by road working crews. Stranger still, eight strips of cement have been put in the full width of the road at different times. The explanation is that the road at this point crosses the McKittrick fault, which leaves the San Andreas major fault some ten miles to the northwest and extends in a southerly direction through the McKittrick oil field to the Buena Vista hills. Behavior of the cement highway suggests to Mr. Stevens that the fault is still active, slippage along it being responsible for the peculiarities noted.

Shell Plans Drilling to 10,000 Feet, Well Now at 8558

LOS ANGELES, June 15

ALTHOUGH there were few completions and recompletions in the California fields the total daily average production was estimated to be about 807,900 barrels, for week ending June 15, an increase of 12,000 barrels over the figure of last week. This total tops the February peak by several thousand barrels.

Unless present proration plans succeed to a greater extent than they have been, production is expected to exceed 850,000 barrels within the next few weeks. This will be caused by the expected completion of a large number of O'Connell zone wells that are either drilling within or just above the 6000 foot level.

Production figures at Santa Fe Springs remained very near to those of last week for, although there were several completions, a fire destroyed two producers whose combined output was in excess of 12,000 barrels. Upper zones yielded 24,216 barrels from 216 wells, while deep sand produced 195,300 barrels from 123 wells to give a field total of 219,516 barrels.

Lower zone production is divided among the various sands as follows: 29 wells in the Nordstrum produced 24,435 barrels, 52 Buckbee producers yielded 33,695 barrels, 38 O'Connell wells gave 134,183 barrels, 1 Upper Clarke well gave 610 barrels, and 3 producers in the Lower Clarke yielded 1457 barrels. Average production per well was 1580 barrels for week ending June 15, as compared with an average of 1605 barrels for the previous week.

Future production from the O'Connell zone is expected to boost the Santa Fe Springs total shortly through the completion in this zone of 25 wells drilling in it, 16 cemented over and 12 preparing to cement in it.

Several operators who failed to obtain commercial production below the Meyer zone are preparing to drill ahead for the Lower Clarke zone as showings from the core barrels of Associated Oil Co.'s. Clarke No. 2 and Oscar-Howard Hathaway No. 5 indicate that that section of the lower Clarke below 7923 feet has some good looking oil sand.

The Associated well is now producing about 500 barrels per day from a depth of 8165 feet and engineers report that there is considerable kick. Oscar-Howard's well is coring ahead at 8006 feet in a very good looking oil sand and expects to make a production test within the coming week. Mud is being changed in this well to prevent a blow-out through its becomirg too gas-cut.

In the center of the field, part of the Upper Clarke zone may be produced together with the O'Connell without encountering an intermediate water sand. General Petroleum Corp., drilling on the eastern edge of the field in its Santa Fe 233, picked up a water sand in the bottom of the O'Connell zone at 6600 feet. This sets the limit on the east flank at which wells may combine both O'Connell and Clarke zones.

Richfield Oil Co. added 2750 barrels to its Lon Beach production through the completion of Bernstein No. 2A from a depth of 7555 feet. This was the only one of the six completions and recompletions that amounted to much. Production from 874 wells in this field was boosted to 174,780 barrels for week ending June 13 an increase of 3280 barrels over the field's total for the previous week.

A new deep drilling record was hung up by Shell Oil Co. in its Nesa No. 11 in the Signal Hill field when a total depth of 8558 feet was reached early this week. Although only a few streaks of oil sand have been found below 8000 feet the well will be deepened to 10,000 feet if mechanical difficulties do not develop.

The present depth of this well exceeded the previous record for deep wells, which was held by Texon Oil Co. in Texas with a total depth of 8525 feet. The Shell well passed the record for rotary wells when it drilled below 8201 feet for it was at this depth that Chanslor-Canfield-Midway Oil Co's. Olinda No. 96 was halted after an unsuccessful attempt had been made to shut off the water. The Olinda well was the first rotary well to go below the 8000 foot level.

Operators in the Santa Barbara field are awaiting with a great deal of interest the outcome of production tests to be made within the next week or so. Several wells are below 1400 feet and as they expect to encounter the oil sand at from 2000 to 2300 feet below the surface. Heavy equipment has been installed and the holes are being started with a sufficient diameter so that if the shallow sand is missed a search may be made for the deep sand claimed to exist in this region.

Developments are also expected from Continental Oil Co's. Baillard No. 1 which is down below 3500 feet. This well is the second to be drilled in the Carpenteria area by the Continental, its Franklin well which blew in with a strong gas pressure, killing three men, several weeks ago is now standing idle awaiting the outcome of test on the Baillard well.

Standard Oil Co. is reported to be drilling out the cement in its No. 81, an offset to the Milham discovery well on the North Dome of Kettleman Hills; casing was set at 6124 feet.

Several other wells will be ready to drill out the cement within the coming week. Among these are Marland Oil Co's. 12-8 and Milham Oil Co's. Elliott No. 2 at 6100 and 6240 feet respectively.

While it is generally supposed that the discovery well is producing from below 7100 feet some operators are of the opinion that the gas and oil may be coming from a higher level.

General Petroleum Corp's. Ochsner No. 2 which came in a few weeks ago at a depth of 6800 feet is nearly ready to be placed back on production after a fishing job had tied it up for several weeks.

A number of other wells in this area are reaching the point where they will bear watching and it is expected that it will not be long before this potential field will be an actuality.

Ratcliffe Again Heads Gasoline Ass'n

LOS ANGELES, June 15.—At a meeting of the California Natural Gasoline Association on June 13, George L. Ratcliffe, of the General Petroleum Corp., was reelected president, and R. E. Beckley was elected vice president. Sixteen directors, who will appoint the treasurer and secretary, were voted upon, but their names have not been announced as, through a mistake made in the first counting, it was decided to recount the votes.

A report of the annual convention of the Natural Gasoline Association of America, held at Tulsa on May 21, 22, and 23, was read at the meeting. This was followed by entertainment furnished by J. A. Campbell Company, J. B. Gill Corp., and Westcott and Greis, Inc.

CLEVELAND, June 15.—The American Petroleum Institute is to begin an intensive study of causes for corrosion in tank steamers and prevention methods. A regional group to work under the Institute's subcommittee on marine corrosion was organized at New York on June 7.

W. D. Fletcher of the Standard Transportation Co., is chairman of the new group. Representatives of the Atlantic Refining Co., Sun Oil Co., Sinclair Navigation Co., The Texas Co., Pan American Petroleum & Transport Co. and others will be on the committee.

Production Cut of 207,271 Bbls. Ordered in California

LOS ANGELES, June 14

IN AN effort to offset the recent increase in the daily average production of California caused by the flush production from new completions, Umpire F. C. van Deinse has issued general order No. 5 contemplating a curtailment of 207,271 barrels per day, based on the estimated potential average over the period June 16 to June 30, 1929 on all wells in the state exclusive of those completed and placed on production subsequent to June 5, 1929.

This new order, effective June 16 at 7 o'clock a.m., carrying the same schedule as order No. 4 for all wells with production of less than 500 barrels, raises the percentage that wells in excess of 500 barrels should be cut from 34.33 per cent to 35.67 per cent.

The column "Excess Production" which up until this latest order has carried no figures for lack of sufficient data, has been filled in and attempts to show the amount of oil each lease has apparently produced in excess of its allotted production under general order No. 3, the effective period of which was from May 16 to May 31, 1929.

Contrary to the general conception, this column indicates that a number of the major companies have not been observing fully the orders, at any rate those up to and inclusive of order No. 3. It also indicates that the majority of small independent operators have failed to take any heed whatsoever of the curtailment orders.

Another added feature of order No. 5 is that new completions in the state must stand their share of the proration plans after a period of four days instead of ten days, as was previously requested.

Allowing completions to flow for ten days from the date they were put on production has been a big obstacle in arriving at the desired 650,000 barrels for the state. Flush production from Santa Fe Springs, which during the past few weeks has ranged from a daily average of from 20,000 to 40,000 barrels, has caused that field to top its alloted quota by as much as 55,000 barrels.

In addition to Santa Fe Springs, Signal Hill (a strictly town lot area), Elwood, and Ventura Avenue showed excess production.

It is interesting to note that in the case of Elwood the excess production exceeds the current allowable production. This is due to the low estimated potential production and also because of the apparent inability of operators in that field to shut their wells down to the production allowed under orders prior to and including No. 3.

Daily actual curtailment for the state is estimated to be nearly 120,000 barrels of which approximately 80,000 barrels is light oil, the remainder being heavy.

Total state daily average production of crude oil was 807,900 barrels for week ending June 15, this is an increase of 12,000 barrels over the production for previous week.

It is expected that new completions in the Santa Fe Springs field will swell the daily average for the state to a total of 850.000 barrels within the next few weeks unless a greater number of operators obey the prorating orders.

Summary of General Order No. 5 Showing California Proration Goal for Last Half of June

Estimated curtailment	Districts	Potential Production	Allotted Production	Excess Prod.	Current Allowable Prod.
	NORTHERN CALIFORNIA DISTRICTS				
1,153	Coalinga	10,111	8,958	186	8,772
2,634	Elk Hills	17,568	14,934	677	14,257
50	Fruitvale	330	289	25	255
1,998	Kern Front	12,213	10,215	967	9,248
546	Kern River	4,765	4,219	247	3,972
1,248	Kettleman Hills	3,500	2,252	770	1,482
560	Lost Hills-Belridge	4,544	3,984	125	3,859
618	McKittrick	4,703	4,085	16	4,069
10,769	Midway-Sunset	71,007	60,238	3,227	57,011
113	Wheeler Ridge	768	655	32	623
	SOUTHERN CALIFORNIA AND COASTAL FIELDS				
1,496	Coyote "west"	9,975	8,479	687	7,792
1,634	Dominguez	10,927	9,293	57.	9,236
9,499	Elwood-Goleta	26,625	17,126	10,622	6,504
2,824	Fullerton-Brea-Olinda-East Coyote	16,602	13,778	111	13,667
7,558	Huntington Beach	45,262	37,704	1,447	36,257
3,786	Inglewood	25,273	21,487	729	20,758
700	Lawndale	2,595	1,895	.....	1,895
46,356	Long Beach	191,085	144,729	33,188	111,541
125	Los Angeles-Salt Lake	1,127	1,002	117	885
1,593	Montebello	10,739	9,146	247	8,899
4	Newport Beach	43	39	4	35
143	Potrero	948	805	62	743
2,421	Richfield	16,304	13,883	176	13,707
648	Rincon	4,311	3,663	447	3,216
915	Rosecrans	6,204	5,289	157	5,132
321	Santa Barbara	900	579	.....	579
70,845	Santa Fe Springs	220,668	149,823	10,909	138,914
590	Santa Maria	4,636	4,046	259	3,787
14,417	Seal Beach-Alamitos Hts.	48,003	33,586	2,934	30,652
12	Summerland	119	107	.....	107
1,980	Torrance	14,113	12,133	386	11,747
18,847	Ventura Avenue	63,329	44,482	717	43,865
700	Ventura County-Newhall	5,220	4,520	552	3,968
6	Watsonville	54	48	5	43
162	Whittier	1,602	1,440	49	1,391
Total 207,271		856,173	648,911	70,134	578,868

Enlarging Kettleman Gasoline Plants

LOS ANGELES, June 14.—Preparations are under way to take care of future production of wet gas in the Kettleman Hill area by gasoline plant enlargements.

The Texas Co. is now completing the installation of six more units to its absorption plant on the Milham-Elliott lease, three of which will be completed within a few days and the balance by July 1.

In addition to the units which will have a capacity of 15,000,000 cubic feet of wet gas each, two large compressors are being installed.

Standard Gasoline Co., a subsidiary of Standard Oil Co. of California, will construct its second absorption plant at Kettleman Hills within the near future. The new plant will be built along the lines of the first which is now being enlarged.

CLEVELAND, June 15.—Abstracts of books and articles dealing with geophysical methods of prospecting have been compiled in a circular by the U. S. Bureau of Mines. The compilation was made by Frederick W. Lee, senior physicist of the bureau. The circular is No. 6133.

Fifty books and articles are abstracted in the 30 page circular. The original works cover the following methods: gravitational, magnetic, seismic, electrical, radioactive, geothermal and unclassified.

Completions in Oklahoma and Kansas, Week Ended June 15, 1929

OKLAHOMA

Cotton County

Company	Well No.	Location	Depth	Init. Prod.
Shasta	2	SWc NW NW SE 2-2-10 W	2168-2193	75
Cullum-Perkins	7	SEc NE NE 3-2-10 W	T.D. 2203	Dry
Cooper-Badgett	1	SEc NW 15-2-11 W	T.D. 2490	Dry
Derdyn-Pruitt	1	NWc SE 21-2-11 W	T.D. 2505	Dry

Creek County

Markham-Tidal	7	CSL NE NW 2-19-7 E	T.D. 2988 OWD	Dry
Sherry-Carter	2	SWc SE NE 36-19-9 E	T.D. 2917	Dry
Miller et al	1	SEc NE 4-17-11 E	T.D. 1875	Dry
Chief Drlg	1	SWc NE 33-16-11 E	T.D. 3066	Dry
Atlantic	1	NWc SE 16-14-10 E	T.D. 3380	Dry
Prairie	2	NWc SW 16-14-8 E	T.D. 3864	Dry
Bartlett	4	SEc NE NW NE 18-19-9 E	1525-1533	4M
Tibbens	5	SEc NE SW 4-18-12 E	2199-2219	8
Lynch et al	3	SWc NE NW 4-18-12 E	1698-1729	4
Magnolia	10	CWL SW SW 27-17-7 E	2768-2832	7

Garvin County

Texas Pacific	1	NWc NE 16-1-3 W	1594-1595	35

Grady County

Meridian	2	SE SW SW 25-4-8 W	2070-2350	6M
Okla. Gas Utilities	2	NE SW SW 11-4-8 W	T.D. 2607	Dry

Hughes County

Shell et al	1	SEc NE 5-6-8 E	T.D. 4654	Dry

Muskogee County

Wachob	1	CEL NE SW 36-15-16 E	T.D. 2440	Dry

Okfuskee County

Prairie	1	NWc NE 2-11-9 E	T.D. 4035	Dry
Praire & P & R Corp.	1	NWc NE 2-11-9 E	T.D. 4035	Dry
Tidal	1	NWc SW 29-12-9 E	T.D. 4231	Dry
Kingwood et al	1	CEL SW SE 16-10-11 E	T.D. 1900	Dry
Prod. & Refs. Corp.	3	NW SE SE 29-12-10 E	3115-3150	480
McMahon-Carey	1	NE SW SE 29-12-10 E	2901-2943	800
Prairie	3	NWc SE SE 29-12-10	3096-3150	20 (1 Hr.)
Fern	1	CEL SE SE 24-11-10 E	T.D. 1852	200
Mid-Cont. et. al	1	NE SW NE 31-11-11 E	2975-3014	60
Moore et al	1	SWc SE NW 12-10-11 E	1535-1565	9

Okmulgee County

Cline	1	SEc NW 19-15-14 E	1648-1675	5M
Taylor-Geiger	9	NWc SW NE SW 22-15-14 E	1666-1688	2
Moffett et al	3	CEL NW NE 7-11-12 E	1947-2090	3
Riney-Williams	4	SEc NE SW 9-14-14 E	T.D. 1902 OWD	Dry

Osage County

Wrightsman	1	NWc SE NW NW 20-26-9 E	T.D. 2371	Dry
Branstetter et al	1	SWc 12-22-11 E	T.D. 1940	Dry
Peters	3	CNL SW 32-24-9 E	1583-1610	25
Winona	2	NW SW SW 27-24-10 E	2007-2057 OWD	8
Peters	2	SEc NW 28-24-10 E	1339-1355	6
I. T. I. O.	405	NEc NW NE SW 35-23-10 E	1605-1621	.5M
Moore Est. et al	2	SW NW NE 16-21-9 E	2120-2155	20

Pawnee County

Company	Well No.	Location	Depth	Init. Prod.
Burton	4	SW SE NW 36-21-8 E	T.D. 1345	Dry

Pottawatomie County

Prairie	1	NE NE SW 18-7-5	T.D. 4267	Dry
Empire-Amerada	2	NW NE NW 8-9-5 E	4380-4386	900
Phillips	1	NE NW NW 8-9-5 E	4358-4372	765

Pontotoc County

Belchie-Laskey	1	C NW SE 32-5-7 E	1476-1495 OWD	10M

Seminole County

Prairie	1	NEc SW NW 5-7-7	4244-4369	470
Texas	9	SEc NE NW NE 19-5-8 E	2525-2625	335
Empire	10	NW NE SE 11-8-5 E	4227-4244	575
Gypsy	10	SW NW SW 6-8-6 E	4240-4247	260
Independent	3	NW NE NE 27-7-6 E	3115-3129	965
Mid-Continent	5	NW SW NE 5-7-7 E	4222-4232	4730
Sinclair-Marland	2	SW NW NW 17-9-7 E	2599-2642	2M
Sinclair	1	SE NE SE 23-5-7 E	4175-4183	850
Prod. & Refg. Corp.	1	NE SE NW 5-7-7 E	4363-4369	470
McCullough	1	SWc NE 4-8-8 E	T.D. 4315	Dry

Stephens County

Magnolia	22	NEc SW 34-1-8 W	1842-1859	17
Lesh-McCall	1	SWc SE NE NE 13-2-8 W	T.D. 2151	Dry

Tulsa County

Hoss-Glidden	2	SEc NW SW 18-19-12 E	T.D. 2385	Dry
Gray	2	C NW NE 3-18-11 E	T.D. 2394	Dry
West Petroleum	1	SWc SE NW 11-18-12 E	840-860	1M

Wagoner County

Horner	2	SEc NW NW 22-18-17 E	807-816	2M
Cherokee Public Service	1	NWc SW 36-16-17 E	869-886 OWD	20

KANSAS

Butler County

Empire	2	NW NE NE 27-27-5 E	2733-2771	250

Cowley County

Krow White	1	C NW NW 9-32-5 E	715-732	7/20M
Krow White	1	C NE SW 9-32-5 E	715-726	7/20M
Prairie	2	SEc SW SE SE 9-32-4 E	3291-3293	1000

Greenwood County

Phillips	2	SE NE NW 10-22-10 E	2250-2297	275
Empire	1	NW NE SW 36-23-11 E	1768-1835	375
Henderson-Holden	1	NW SW NE 10-22-10 E	T.D. 2304	Dry
Davis-Hazlett	1	NEc SW 10-22-10 E	T.D. 2289	Dry

Harvey County

Hart.-Skaer et. al	1	NW NE SE 26-24-1 E	T.D. 3535	Dry

Sedgwick County

Bu Vi Bar et al	1	NW SW NE 7-26-1 E	3402-3405	500
Davis-Skelly	7	SW SE NE 1-26-1 W	3370-3375	1375
Davis-Skelly	6	SEc NE 1-26-1 W	3373-3379	1305
Flake	1	SEc 18-26-1 E	T.D. 1965	Dry
Champlin	4	NW SE NW 9-30-3 W	3066-3090 OWD	25
Champlin	1	NW NE SW 9-30-2 W	3185-3200 OWD	25

Completions in California, Week Ended June 15, 1929

LONG BEACH

Company	Well No.	Location	Depth	Init. Prod.
Richfield Oil Co	Alsop 1	....	6049	75

Santa Fe Springs

Associated Oil Co	Clarke 2	....	8165	1400
General Pet. Corp	S. F. 217	....	6741	3600
General Pet. Corp	S. F. 186 G	....	6270	576
General Pet. Corp	S. F. 190 C	....	6482	3900
Shell Oil Co	G. H. N. 16	....	6575	1860
The Texas Co	Baldwin 4	....	6840	10500
The Texas Co	Weaver 7	....	6789	9000
Universal Oil Co	O'Connell 5	....	7650	650
York-Lockhardt	S. F. 2	....	6765	4400

Seal Beach

Associated Oil Co	Bryant 5	....	5470	405
Marland Oil Co	Bixby 11	....	5497	1900
Marland Oil Co	Mcgrath-Selover 1	....	5420	1000

Richfield

Company	Well No.	Location	Depth	Init. Prod.
Valencia Synd	Kroeger 1	....	3220	50

Belridge

Ohio Oil Co	No. 25	30-28-21	680	45

Fruitvale

Mohawk Oil Co	No. 4	27-29-27	4158	560
Western Gulf Oil Co.	Sweitzer 1	27-29-27	3878	700

Rincon

Richfield Oil Co	Hobson Fee 1	....	7449	261

New Field Operations in Oklahoma, Kansas, North, North Central, East Central, Panhandle and West Texas, Week Ended June 15, 1929

OKLAHOMA

Carter County

Company	Well No. & Farm	Location
Ven Mex	1-Denny	SE SW SW 20-1-3 W

Cotton County

Cullum-Perkins	1-Patterson	SWc SE NE NE 4-2-10 W

Creek County

Magnolia	12-Musselman	SE SW SE 8-18-7 E	
Wells et al	3-Tahledge	CWL NW NW 10-18-11 E	
Apex	3-Fife	NEc SW SW 28-18-11 E	
Mid-Continent	30-Stewart	SWc 15-17-7 E	
Sinclair	8-Dacon	SWc SE SE 16-17-7 E	
Texas	12-Goodin	SWc SE 16-17-7 E	OWD
Central Com.	1-Bucktrot	NWc SE SW 26-17-10 E	
Henry-Aver	1-Harris	SEc SW SE 12-17-10 E	OWD
Roxaline	1-Chamberlain	C SE SE 28-17-12 E	
Tibbens	3-Lucas	SEc NW NW NW 31-15-9 E	
Shaffer et al	3-Lewis	NEc SW SW 10-15-8 E	
Elson et al	1-McKee	SWc 6-14-10 E	

Grant County

Cons. Utility	1-Sheeper	C NE NE 2-27-3 W	
Cons. Utility	1-Secatt	C SE SW 35-28-3 W	
Cons. Utility	2-Henn	C SW NE 35-28-3 W	

Jefferson County

Beck	3-Seay	SEc SW SW 34-6-5 W	

Kay County

Tillery et al	2-Buzelton	C NE SW 5-27-1 E	
Nehr et al	2-Galloup	CSL SW SW 30-28-1 E	

Kiowa County

Rymer et al	1-Hobbs	SE SW SW 7-6-16 W	

Muskogee County

Burke et al	1-Walker	CSL SW SW 7-15-18 E	
Bryan	3-Simmons	C NW SW 3-15-15 E	

Okfuskee County

Company	Well No. & Farm	Location
Buckles et al	1-Tarvin	NWc SE 9-11-10 E
Burke-Greis	1-Hawkins	SW SE NE 33-11-11 E
Kingwood et al	2-Simmer	NWc NE SW 2-10-11 E
Misener-Kingwood	2-Robinson	SEc SW NW 12-10-11 E

Okmulgee County

Tiger Mountain	4-Tucker	CSL NE SE 2-13-14 E	

Osage County

Peters—P & R. Corp.	2....	NWc NE 27-27-11 E	
Moore Est. et al	3....	SE NE NW 16-21-9 E	

Pontotoc County

Boucher	1-Hardin	SW NW NW 31-4-7 E	

Pottawatomie County

Prairie et al	2-Rice	NE SE NE 17-7-4 E	
Prairie et al	2-Cummings	SE NE NE 17-7-4 E	
Prairie-Slick	4-Laster	SW SE NE 19-6-4 E	
Prairie-Slick	5-Laster	SE SW NE 19-6-4 E	
Prairie	4-Laster	SWc SE NE 19-6-4	
Prairie	5-Laster	SEc SW NE 19-6-4 E	
Phillips	2-Reed	SE NW NW 8-9-5 E	
Barnsdall-I. T. I. O.	1-School Land	SE SW SW 16-8-5 E	
Atlantic-Indep	2-Burke	NWc NE 16-7-4 E	
Indep.-Westland	4-Rhodd	SE NW NW 16-7-4 E	
Indep.-Westland	3-Rhodd	NE NW NW 16-7-4 E	
Darby	3-Youngblood	NEc NW 16-7-4 E	
Magnolia	1-Robbins	NE SE SE 15-7-4 E	OWD
Indep.-Westland	1-Booze	SW NE SE 9-7-4 E	
Slick	5-Bledsoe	SW NW SW 20-6-4 E	

Seminole County

Shaffer	3-McKoy	SE SW SW 36-10-5 E	
Carter	1-Mayhue	SW NE SW 11-9-6 E	
Marland-Shaffer	3-Harris	NWc SW 4-7-7 E	
Sunray-Cal-Cul	3-Joanna	NWc SW 24-5-7 E	

(*Continued on Page 55*)

New Field Operations in Oklahoma, Kansas, North, North Central, East Central, Panhandle and West Texas, Week Ended June 15, 1929

(*Continued from Page 54*)

Company	Well No. & Farm	Location	
Prod. & Refs. Corp.	2-Thomas	SEc NW 5-7-7 E	
Prairie	2-Thomas	SE SE NW 5-7-7	
Stephens County			
Pace et al	5-McMasters	NE NW NE 13-2-8 W	
Magnolia	10-Burke	SWc SE SW NE 34-1-8 W	
Twin State	3-Cole	NEc SE 14-1-4 W	
Tulsa County			
Glidden	1-Phillips	CEL NW SW 15-19-11 E	
KANSAS			
Butler County			
Prod. Pet. Co.	2-Holcomb	NE SW NW 8-29-4 E	
Garden	4-Sluss	C W½ NE NW 6-27-6 E	
Empire	18-Hess	NW SE NW 18-26-5 E	
Empire	81-Koogler	NW SE NE 19-26-5 E	
Empire	84-Koogler	SEc NE 19-26-5 E	
Empire	83-Koogler	SE NW NW 20-26-5 E	
Empire	82-Koogler	SW NW NW 22-26-5 E	
Carter	11-Stone	SW SE NW 2-25-5 E	OWD
Lilly-Schreck	1-Nuttle	C NW 10-25-5 E	
Maxwell	1-Maxwell	SWc NE 31-24-4 E	
Chautauqua County			
Prairie	1-Foster	NEc SW 13-34-9 E	
Cowley County			
Wakefield-Osborne	1-Moore	SE NE NW 18-30-5 E	
Krow White	1-McEwin	C SE SW 4-32-5 E	
Elk County			
Frantz et al	1-Spray	SW SE SW 12-31-10 E	
Greenwood County			
Transcontinental	1-Holland	SWc NE 36-23-11 E	
Empire	1-Patterson	SE SW NW 36-23-11 E	
Empire	2-Patterson	SE NE SW 36-23-11 E	
Prairie	1-Parrish	NWc NE 16-24-12 E	
Harvey County			
Marland et al	1-Neiman	SWc SE 26-22-2 E	
Hodgeman County			
Phillips	1-Hauseman	NW NE NE 30-22-22 W	
McPherson County			
Marland et al	1-Swenson	NE SW NE 36-18-4 W	
Marion County			
Shell	1-Soully	NWc NE 34-18-2 E	
Ness County			
Marland	1-Moses	NEc SE 7-18-25 W	
Reno County			
Skelly-Gypsy-Amerada-Prairie	1-Birket	NEc SW 30-24-7 W	
Sedgwick County			
Keller-Lewis	1-Buckles	NWc SE 3-28-1 W	
Milmac	1-Stuckey	NWc 22-28-1 E	
Derby	1-Blood	NWc SW 28-28-1 E	
Marland	1-Mackey	SE NW SW 30-27-2 E	
Davis-Skelly	9-Wilson	SWc NE 1-26-1 W	
Davis-Skelly	10-Wilson	SW NW NE 1-26-1 W	
Bu Vi Bar et al	1-Miles	NEc SW SW NE 7-26-1 E	
Bu Vi Bar	7-Shawver	NWc 7-26-1 E	
Derby	1-Hladik	SWc SE SW 15-26-2 E	
Kenney et al	1-Richard	NEc SW SW 15-26-2 E	
Sumner County			
Champlin	2-Love	NE NW SW 9-30-2 W	OWD
Laredo	1-Welch	SWc SE 9-34-1 E	
Tidal	1-McCutcheon	SWc 23-34-2 E	
Woodson County			
Mellrose-Sullivan	1-Eckhoff	NEc NW 35-23-14 E	
TEXAS			
NORTH CENTRAL AND EAST CENTRAL			
Brown County			**Survey**
Campbell et al	2-Turner	Sec-61	HT&B
Van Bibber	1-Looper	Blk-620	Woodward
Van Bibber	1-Evans	Blk-16	Cosbett
Nat. Gas & Fuel	7-Capps	Blk-17	Sullivan
Nat. Gas & Fuel	6-Capps	Blk-18	Hunt
Whiteside	8-Boyson	Sec-7	ET
Callahan County			
Campbell	1-Hennesey	Sec-72	BBB&C
West	1-Able	Sec-32	D&DA
Barnhart	2-McFarland	Sec-248	Youngblood
Woodley	3-Finley	Sec-74	BOAL
Crites	1-Brown	Sec-47	D&DA
Campbell	1-Kinnard	Sec-26	ET
Coleman County			
Midwest Explor.	2-Kenney	Blk-269	Kenney
Eastland et al	3-Kenney	Blk-269	Cochran
Eastland et al	2-Kenney	Blk-269	Cochran
Green-Midsun	1-Johnson	Blk-245	Flynn
Tidal	1-Flippen	Blk-84	Deadrick
Mitchell-Groves	1-Jameson	Blk-483	Woods
White Eagle	1-Morris	Sec-25 Blk-722	Webber
Tower-McKanna	1-Crowder	Blk-483	Woods
Smith-Shaffer	3-Russell	Sec-10 Blk-751	Martinez
Jack County			
Art et al	1-Raley	Sec-256	Hughson
McGuire	1-Clayton	.....	Mathews
Shabay et al	1-Loving	Sec-2746	TE&L
Jones County			
Clark et al	1-Dickinson	.....	Williams No.-273
Phillips	2-Low	Sec-15 Blk-19	T&P
Phillips	4-Pomeroy	Sec-16 Blk-19	T&P
Shackleford County			
Hogan	1-Flippen	Sec-36 Blk-11	T&P
Cranfill-Reynolds	2-Moberly	Sec-48 Blk-11	T&P
Slicker	1-Mathews	Sec-58	ET
Throckmorton County			
Pannell et al	1-Downing	Sec-913	TE&L
NORTH TEXAS			
Archer County			
Smith	4-Prideaux	Sec-1860	TE&L
Massie	7-Wilson	Sec-23 Blk-4	ATNCL
Continental	B-3-Richardson	Blk-10	McCoy
Madden	18-Richardson	Blk-10	SAR
Pet. Prod	B-3-Kunkel	Sec-3	BBB&C
Humble	3-Kunkel	Sec-3	BBB&C
Gilliland et al	2-Roach et al.	Sec-1595	TE&L
Cont.-Cullum	2-Falls Co. Sch. Ld.	Blk-9	FCSL
Grebin et al	1-Graham	Blk-23	Meade
Hodge-McCarty	1-Lane	Blk-46	Meade
Humble	8-Logan	.....	Armes
Bridwell-Cont.	1-Logan	Blk-25	Taylor
Humble	1-Turveville	Blk-154	Carson
Shappell	6-Lyles	Blk-7	Hooper-Wade
Perkins-Cullum et al.	1-Andrews	Sec-? Blk-143	Carson
Fain-McGaha	2-Taylor	Sec-17 Blk-11	ATNCL
Cooke County			
Lloyd	1-Stack	.....	Reed
Lloyd	1-Newman	.....	Collinsworth
Kewanee	1-Hair	.....	Lockhard
Humble	1-Field	.....	Bowers
Wichita County			
United Prod. et al.	1-Kemp et al.	Blk-28	KWVFL
Golding-Cochran	4-Waggoner	Blk-22	George
Bullington-Pendleton et al.	1-Jennings	Sec-12	HT&B
Wilbarger County			
Patterson	1-Waggoner	Sec-1 Blk-4	H&TC
Fain-McGaha	W-8-Waggoner	Sec-32 Blk-4	H&TC
Fain-McGaha	Y-2-Waggoner	Sec-43	MEP&P
Apple-Brandeberry	2-Waggoner	Sec-32 Blk-4	H&TC
Roberts-Carter	1-Waggoner	Sec-17 Blk-4	H&TC
Carter et al	3-Waggoner	Sec-9 Blk-4	H&TC
Consolidated	O-3-Waggoner	Sec-40	MEP&P
Knight et al	A-3-Waggoner	Sec-40	MEP&P
Waggoner	J-3-Waggoner	Sec-25 Blk-4	H&TC
Knight et al	E-1-Waggoner	Sec-21 Blk-4	H&TC
Shaw	G-4-Waggoner	Sec-40	MEP&P
Staley-Wynne	X-1-Waggoner	Sec-10 Blk-4	H&TC
Empire	C-7-Waggoner	Sec-25 Blk-4	H&TC
Burton et al	I-4-Waggoner	Sec-40	MEP&P
Fain-McGaha	EE-1-Waggoner	Sec-43 Blk-2	H&TC
Young County			
Kimbrell-Lyles et al.	5-Dyer	.....	Stoud
M & V et al	2-Thomas	Sec-155	TE&L
Carpenter	1-Barrett	.....	Sergeant
Underwood Drlg. et al.	1-Bagley	.....	Franklin
Bradstreet	2-Mathews	.....	Rohus
Texas	2-Stewart	.....	BBB&C
Ryan-Stastny	1-Stewart	.....	Tynes
Shinola	2-Haygood	Sec-1466	TE&L
Flutey et al	1-Wadley	.....	Coffman
Shaw Interest	1-Kisinger	.....	Conner
PANHANDLE			
Carson County			
Ryan Consolidated	4-Black	Sec-11 Blk-4	I&GN
Skelly	5-Schaeffer	Sec-198 Blk-3	I&GN
Skelly	16-Schaeffer	Sec-87 Blk-4	I&GN
Gray County			
McMan	2-Saunders	Sec-1	Eustice
McMan	?-Jackson	Sec-90 Blk-B-2	H&GN
Texas	3-Patton	Sec-61 Blk-B-2	H&GN
Sun	2-Purviance	Sec-61 Blk-B-2	H&GN
Magnolia	5-Bowers	Sec-63 Blk-B-2	H&GN
Gulf Prod	2-Jackson	Sec-62 Blk-B-2	H&GN
Gulf Prod	1-Faulkner	Sec-36 Blk-3	H&GN
Gulf Prod	1-Worley	Sec-36 Blk-3	I&GN
Champlin	2-Cable	Sec-33 Blk-B-2	H&GN
Humble	1-Jackson	Sec-90 Blk-B-2	H&GN
Texas	1-Archer	Sec-174 Blk-3	I&GN
Texas	8-Bowers	Sec-89 Blk-B-2	H&GN
Texas	12-Saunders	Sec-1	Eustice
Texas	13-Saunders	Sec-1	Eustice
Hutchinson County			
Rock Creek	3-Johnson	Sec-28 Blk-Y	A&B
Phillips	4-Perkins	Sec-2 Blk-1	H&GN
Phillips	4-Ford-Johnson	Sec-28 Blk-Y	A&B
Skelly	8-Whittenburg	Sec-22 Blk-V	Whittenburg
Skelly	7-Whittenburg	Sec-22 Blk-V	Whittenburg
Huey et al	3-Smith	Sec-12 Blk-V	.....
Wheeler County			
Lone Star	1-Stauffer	Sec-102 Blk-23	H&GN
Lone Star	2-Linkey	Sec-129 Blk-23	H&GN
Texas	1-Hicks	Sec-53 Blk-17	H&GN
Lone Star	2-Griswold	Sec-1 Blk-24	H&GN
Lone Star	1-Lamb	Sec-91 Blk-17	H&GN
WEST TEXAS			
Crane County			
Tidal	9-University	Sec-47 Blk-30	Univ.
Glasscock County			
World	3-McDowell	Sec-21 Blk-34	T&P
Howard County			
Merriweather	1-Smith	Sec-45 Blk-33	T&P
Pecos County			
McMan	7-Smith	Sec-25 Blk-194	TC
Cosby	2-Smith	Sec-24 Blk-194	TC
Mid-Kansas & Transc.	29-Yates	Sec-34½	Vacancy strip
Adams	1-University	Sec-12 Blk-17	Univ.
Gibson-Johnson	1-Grace	Sec-3 Blk-179	TC
Rio Pecos	2-Yates	Sec-543-Blk-1	H&GN
Mid-Kansas & Transc.	28-Yates	Sec-34½	Vacancy strip
California	4-Smith Lease-2	Sec-26 Blk-194	TC
California	4-Smith Lease-1	Sec-21 Blk-194	TC
Marland	1-University	Sec-10 Blk-17	Univ.
Phillips	1-Bowser	Sec-77 Blk-O.W.	.....
Winkler County			
Gulf Prod	1-Clapp	Sec-57 Blk-26	PSL

Completions in Texas, Week Ended June 15, 1929

NORTH CENTRAL AND EAST CENTRAL

Brown County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Whiteside	7-Boyson	ET	Sec-7	766-778	8
Warren et al	2-Duff	Honeycutt	Blk-623	1143-1151	80
Pandem	12-Westerman	Mitchell	Blk-150	T. D. 1265	Dry
Duffey et al	1-Hill	Mudgett	Blk-63	T. D. 1354	Dry
Bearman et al	4-Spencer	Swindle		T. D. 1116	Dry
Anzac et al	1-Brooks	Holstein	Blk-115	T. D. 1397	Dry

Callahan County

Texas	6-Hatchett	D&DA	Sec-24	406-415	15
Moutray	44-Hickman	BBB&C	Sec-149	707-713	15
Gunn Prod	1-Orrell	Comal Co. Sch. Ld.	Sec-97	1691-1692	10
Grass Roots	3-Conlee	Comal Co. Sch. Ld.	Sec-44	430-445	4
Ewmo	6-Beasley	D&DA	Sec-25	710-719	7
Humphries	6-Gary	D&DA	Sec-40	T. D. 430	Dry
Oyster-Rife	1-Ross et al.	BBB&C	Sec-86	T. D. 1542	Dry
Woodley	2-Finley	BOAL	Sec-74	T. D. 868	Dry

Coleman County

Rex Tex Py Tex	1-Baker	Fisk	Blk-630	1372-1379	30
Samuels et al	1-Gill	Cannon	Blk-69	T. D. 1005	Dry
Gwinnup et al	2-House	Johnson	Blk-481	T. D. 2054	Dry
Cunningham et al.	8-Jennings	Lipscomb	Blk-94	1170-1190	25

Eastland County

Parsons	1-Stubblefield	McClennan Co. Sch. Ld.	Sec-21	T. D. 3495	Dry
Mook Texas	1-Parker	Van Norman	Sec-16	T. D. 3620	Dry
McLester et al	2-Allen	Foster		T. D. 3375	Dry
Garver	1-Fields	Rubarth	Blk-4	T. D. 2802	Dry

Erath County

Associated	2-Carey	Espinosa		3210-3250	3¼M

Jack County

Boyson	1-Daugherty	Leffel		3200-3220	56
Hart et al	1-Mask	TE&L	Sec-2708	T. D. 2505	Dry
Liedecker	1-Box	Box		T. D. 3280	Dry

Jones County

Phillips	3-Pomroy	T&P	Sec-16 Blk-19	2476-2487	130

Montague County

Lanier et al	1-Hott	O'Conner	Blk-10	T. D. 2502	Dry

Palo Pinto County

Shaw et al	1-Chestnut	T&P	Sec-40 Blk-A	T. D. 5123	Dry
Gordon-Gholson	1-Thaiz	T&P	Sec-45 Blk-1	2072-2075	3½M

Shackleford County

Ritterbusch	1-Nail	ET	Sec-41	T. D. 1202	Dry
MacBest et al	1-Isenhomer	Buster		T. D. 1006	Dry

Stephens County

Lone Star	1-Compton	T&P	Sec-20 Blk-7	T. D. 4183	Dry

NORTH TEXAS

Archer County

Smith	3-Prideaux	TE&L	Sec-1860	728-731	42
Pet. Prod. et al.	3-Phillips	BBB&C		1181-1186	30
Humble	7-Logan	Armes		1131-1134	20
Fain-McGaha	1-Taylor	ATNCL	Sec-17 Blk-11	1488-1491	150
Continental	2-Richardson	McCoy	Blk-10	1145-1152	210
Continental	2-Logan	Armes		1113-1130	24
Rose et al	1-Campbell	Crawford	Blk-11	T. D. 1350	Dry
Pet. Prod.-United Prod.	1-Coleman	ATNCL	Sec-81	T. D. 1575	Dry
Peacock	1-Williams	Swing		T. D. 560	Dry
May Camp Drlg	5-Prideaux	Rohus		T. D. 660	Dry
Humble	2-Falls Co. Sch. Ld.	Blk-33		T. D. 1223	Dry
Hines et al	1-Slaughter	Meade	Blk-15	T. D. 1481	Dry
Burns	1-Stopanskey	Harris	Blk-64	T. D. 1553	Dry

Clay County

Mid-Cont. Holdings	1-Stine Bros.	Parker Co. Sch. Ld.	Blk-7	1741-1756	24

Cooke County

Texas	9-Dennis	Hutchinson		1221-1251	245
Shell	1-Dennis	Hutchinson		T. D. 2023	Dry

Wichita County

Eilson Drlg	5-Kemp	KWVFL	Blk-57	T. D. 1978	Dry
Clark-Bridwell	1-Frankel	Cohen et al.	Blk-326	T. D. 1950	Dry
Bradstreet	1-E-Waggoner	H&TB	Sec-13	T. D. 2060	Dry
Barclay-Faith	2-Kemp	KWVFL	Blk-40	T. D. 1802	Dry
Riner-Bailey	5-Michie	Netherly		1774-1795	55
Hines	4-Burnett	Meade	Blk-6	1388-1450	10
Golding-Cochran	2-M-Waggoner	George	Blk-23	1291-1303	56
Bullington-Pendleton-Lee	3-Jennings	H&TB	Sec-12	1594-1609	8

Wilbarger County

Waggoner	K-7-Waggoner	H&TC	Sec-31 Blk-4	2379-2383	24
Phillips	T23-Waggoner	H&TC	Sec-45 Blk-4	1861-1888	65
Phillips	S-2-Waggoner	H&TC	Sec-45 Blk-4	1873-1876	6
Staley-Wynne	F-6-Waggoner	H&TC	Sec-32 Blk-4	2404-2413	225
Staley-Wynne	B-3-Waggoner	H&TC	Sec-25 Blk-4	1900-1907	208
Melot	A-6-Waggoner	H&TC	Sec-10 Blk-4	1985-1998	70
Lewis Prod	7-Waggoner	H&TC	Sec-18 Blk-4	2386-2416	185
Knight et al	A-2-Waggoner	MEP&P	Sec-40	1869-1881	200
Grayback Dev.	2-Waggoner	H&TC	Sec-10 Blk-4	1987-1997	80
Fain-McGaha	W-3-Waggoner	H&TC	Sec-32 Blk-4	1848-1851	30
Easter	A-4-Waggoner	H&TC	Sec-26 Blk-4	2361-2365	386
Carter	2-Waggoner	H&TC	Sec-9 Blk-4	1985-1998	82
Waggoner	J-1-Waggoner	H&TC	Sec-25 Blk-4	1870-1880	108
Waggoner	C-8-Waggoner	H&TC	Sec-24 Blk-4	2344-2396	30
Staley-Wynne	M-1-Waggoner	MEP&P	Sec-39	T. D. 1926	Dry
Cosden	B-34-Waggoner	H&TC	Sec-26 Blk-4	T. D. 2708	Dry
Simpson-Fell	1-Waggoner	BS&F	Sec-1 Blk-19	T. D. 2205	Dry
O'Neal	1-Parker et al.	H&TC	Sec-8 Blk-3	T. D. 2601	Dry
Lawson	F-1-Waggoner	H&TC	Sec-7 Blk-4	T. D. 2568	Dry
Hammond-Mitcham Consolidated	1-Waggoner	H&TC	Sec-15 Blk-4	T. D. 2016	Dry
	N-1-Waggoner	H&TC	Sec-1 Blk-13	T. D. 1944	Dry

Young County

McMeans	1-Keith	TE&L	Sec-268	T. D. 850	Dry
Hawkins et al	2-Owens	BBB&C	Sec-1	T. D. 754	Dry
Edmondson	1-Johnson	Sergeant	Blk-3	T. D. 615	Dry
Bradstreet	2-Richar lson	Maupin		T. D. 715	Dry
Riggs et al	29-McKinley	TE&L	Sec-1489	T. D. 586	25
Kimbrell-Lyles et al.	4-Dyer	Stroud		570-584	2

PANHANDLE

Carson County

Ryan Cons	2-Block	I&GN	Sec-111 Blk-4	3085-3091	245
McIlroy	1-Lewis	I&GN	Sec-115 Blk-4	3090-3160	90

Gray County

McMan	1-Saunders	Eustice	Sec-1	2562-2583	1470
Magnolia	4-Bowers	H&GN	Sec-63 Blk-B-2	2890-2970	9700
Texas	2-Faulkner	H&GN	Sec-29 Blk-B-2	2855-2865	7844
Texas	1-Patton	H&GN	Sec-61 Blk-B-2	2914-2925	925

Hutchinson County

Phillips	2-Ford et al.	A&B	Sec-28 Blk-Y	2870-2875	770
Marland	1-Johnson	B&B	Sec-5 Blk-1	3050-3055	1335

Moore County

Phillips	1-Burnett	T&NO	Sec-192 Blk-3-T	3372-3582	23M
Phillips	3-James et al.	Robinson		3131-3139	70

Wheeler County

Gibson	7-Bentley	H&GN	Sec-43 Blk-24	2316-2390	416
Texas	2-Gordan	H&GN	Sec-91 Blk-17	1880-1884	30M

WEST TEXAS

Borden County

Hyde	1-Beale	T&P	Sec-14 Blk-31	T. D. 3604	Dry

Crane County

Duffey et al	5-Cowden	CCSD	Sec-17 Blk-X	T. D. 2966	Dry

Glasscock County

California	5-Roberts Lse-2	W&NW	Sec-156 Blk-29	1862-1883	30

Howard County

Green	3-Clay	W&NW	Sec-127 Blk-29	1750-1785	75
Schermerhorn	1-Roberts	W&NW	Sec-137 Blk-29	2567-2620	175

Pecos County

Mid-Kans. & Transc.	26-Yates	Scrap Lands	Sec-34½	1400-1465	3450 (1 Hr.)
California	2-Smith-Lse-5	TC	Sec-16 Blk-194	1557-1579	15

Completions in North Louisiana and Arkansas, Week Ended June 13, 1929

LOUISIANA

Caddo Parish

Company	Well	Location	Depth	Yield
Standard Oil Co.	Oden No. 1	18-19-14	2405	250 bbls.

De Soto Parish

Mag. Pet. Co.	Clements No. 1	28-12-11	2612	100 bbls.

Grant Parish

Carter and Collins	Bell Lbr. Co. No. 1	29-7-1W	2004	Dry, abnd.

Ouachita Parish

Peerless Carbon Co.	Moore No. 5	51-20-4S	2142	8¼M gas

Sabine Parish

W. J. Garnier	Bowman Hicks No. 1	16-7-12	625	Dry-abnd.

Webster Parish

Magnolia Pet. Co.	B. M. Cook No. 1	2-22-11	3215	S.W. Abnd.

ARKANSAS

Ouachita County

Company	Well	Location	Depth	Yield
Arkansas Drill. Co.	Crowley No. 1	27-15-18	3220	Dry-abnd.
Sims Oil Co.	Hildebrand No. 11	28-15-15	2006	25 bbls.
Ravenger Oil Co.	W. H. Perdue No. B-2	9-17-14	2795	15 bbls.

Union County

Ohio Oil Co.	E. Raulston No. 1	12-17-14	3041	360 bbls.
Oil Well Corp	Perdue E-1	9-17-14	3310	dry-abnd.

TEXAS

Panola County

Eureka Nat. Gas Co.	Gulley No. 3	James Mat-thews HRS	2315	10 bbls.

Aerial view of Gypsy Oil Co. flowing plant in the Mission pool

Gas Lift Practice of 15 Companies In Seminole District

Compiled by J. R. McWilliams*

As presented May 29 before the Tulsa meeting, Mid-Continent section, American Petroleum Institute Division of Development and Production Engineering

This paper has been prepared through the agency of sending a questionnaire to each of the major operators in the greater Seminole area and asking them to answer the questions dealing with gas lift practice at Seminole. In order to obtain frank answers to the questions it was agreed that the names of those answering the questions would not be used in connection with the paper.

Replies were received from fifteen companies, answering as many questions as they had data upon or formed conclusions. The answers to each question have been compiled and inserted after each question. The numbers shown in brackets in the answers signifies how many concurred in that specific answer. It should be understood that the answers represent Seminole conditions only and that the producing horizon referred to is the Wilcox, unless otherwise specified.

Compressor Plants

Designation—

Type A—Compressors driven by 2 or 4 cycle gas engines.

Type B—Compressors driven by multicylinder gas engines.

Type C—Compressors driven by electric motors.

Note:—In the following questions HP refers to that required to run the compressor at its rated capacity.

1. In the light of past experience what are the factors which would influence or discourage the installation of each type of equipment?

Type A—Advantages: Low cost operation per HP, high salvage on machinery, suitable for gasoline plants or repressuring after salvaging, slower speed machines and therefore have longer life, high percentage of running time.

Type A — Disadvantages: Higher first cost, cost operation higher if fuel gas must be purchased, time required for installation.

Type B—Advantages: Rapid installation, lower installation cost, portable installation where electrical power not available.

Type B—Disadvantages: High maintenance cost, low percentage of running time, high speed machines, therefore more rapid depreciation, increase fire hazard in engine rooms.

Type C—Advantages: Low initial cost, speedy installation, can be erected on timbers, high percentage running time, minimum depreciation, high salvage.

Type C—Disadvantages: High cost operation account electrical power, usual size motors not suitable for other work economically, no ready sale for equipment.

2. Tabulate the order in which each type of equipment is most dependable for continuously delivering the full capacity of the compressors to the gas lift wells.

1st—Type C (7)—Type A (6)—Type B (1).

2nd—Type A (7)—Type C (7).

3rd—Type B (13)—Type A (1).

3. Assuming that a gas lift plant of approximately 1000 HP would operate through the period of time as tabulated below and then salvaged, what type of plant should be installed from an economical viewpoint?

3 Months—Type C (11)—Type B (3).

6 Months—Type C (11)—Type B (2)—Type A (1).

9 Months—Type A (8)—Type C (5).

12 Months and longer—Type A (10)—Type C (3).

4. Give the following information

*Skelly Oil Co.

The most productive acreage in the World

Several shallow wells were drilled in Spindle Top field in 1893, but the real discovery well was drilled by Captain Anthony F. Lucas, Jan. 10, 1901. The well was completed at 1139 feet and production was estimated at from 75,000 to 125,000 barrels per day.

The peak of shallow production was reached in 1902 when a total of 17,500,000 barrels of oil was recovered.

Late in November, 1925, the Yount-Lee Oil Company discovered a deep pay sand, ushering in a second boom for this great field, production reaching 100,000 barrels daily at the close of 1926.

It is estimated that more than 100,000,000 barrels of oil has been recovered at Spindle Top, and the total area comprising the field is a little less than 375 acres.

Comparison of the equipment, tools and methods used when Captain Lucas completed the first well in this field with that used since the Yount-Lee Oil Company found the deeper sand will emphasize the great advancement made during the past quarter century.

The Hughes Tool Company, through the perfection of its rock bits, core bits, tool joints, disc bits, and drilling valves has served this world industry by greatly increasing drilling efficiency and lowering the cost of drilling. Hughes Tools are used throughout the rotary fields of the world.

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HUGHES TOOL COMPANY

Service Plants:
Los Angeles, Calif.
Oklahoma City, Okla.

Main Office and Plant:
HOUSTON,
TEXAS

Export Office:
Woolworth Bldg.
New York City

according to your company's operations:

Time in Service	Per cent	Plant HP	Per cent	HP in plant still in oper.
Plant installed but never operated	2.2	2,455	.....	.....
Plant in operation 0-3 months.....	7.4	8,325	16.0	8,470
Plant in operation 3-6 months.....	6.8	7,645	10.4	5,510
Plant in operation 6-9 months.....	16.1	18,045	27.3	14,495
Plant in operation 9-12 months.....	8.6	9,670	11.4	6,070
Plant in operation over 12 months....	58.8	65,885	34.9	18,480
Total	100	112,025	100	53,025

(Number answering first half 12.)
(Number answering second half 10.)

5. What is the total cost per HP to completely install a gas lift plant of approximately 1000 HP with no costs incidental to gasoline manufacture only taken into consideration?

Type A—$89.00, $90.00 (2), $95.00, $100.00 (5), $103.00, $110.00, $160.00. Average $103.00.

Type B—$44.00, $47.00, $63.00, $65.00, $90.00, $100.00. Average $68.00.

Type C—$50.00, $55.00, $60.00, $70.00 (2), $75.00, $80.00, $110.00. Average $61.00.

6. What is the salvage value per HP of a gas lift plant of approximately 1000 HP?

Type A—65 per cent, 66 per cent, 70 per cent, 75 per cent (2). Average 70 per cent.

Type B—70 per cent, 80 per cent, 85 per cent. Average 78 per cent.

Type C—80 per cent (2), 85 per cent. Average 82 per cent.

7. What is the cost of operation (excluding depreciation) per HP per day of a gas lift plant of approximately 1000 HP assuming that there is no charge made for gas used for plant operations?

Type A—Cents per HP day—5, 5.83, 6.7, 6.6, 7.0 (2), 7.8, 10. Average 7.

Type B—Cents per HP day—13.8, 15, 16, 19. Average 16.

Type C—Cents per HP day—14.3, 16 (2), 18, 22.3, 25 (2), 26, 26.6, 31. Average 22.

8. What volume per day of gas or air will one HP compress on an average with atmospheric pressure on the suction and 300 pounds per square inch on the discharge, the measurement to be made on the suction and computed on a 4 oz. pressure basis? Results obtained under usual field operating conditions desired rather than those obtained under ideal conditions when equipment is new.

Answer: 2400, 3000, 4000 (5), 4100, 4400, 4500, 5000, 6500. Average 4160.

9. What average percentage of the volume of the gas going to the suction is discharged into the high pressure header if the gas is recycled and the gasoline content removed?

Answer: 75 per cent (3), 78 per cent, 80 per cent (2), 96 per cent, 97 per cent, 98 per cent. Average 86 per cent.

10. What are the advantages and disadvantages of a centrally located gas lift plant as compared to several smaller plants located throughout an area?

Advantages — Lower installation charges, lower operation expenses especially on labor, greater flexibility in operations, permits centrallized supervision, greater volumetric efficiency per HP operated, more stable for gasoline investment, size of plants permits large units, less number of standby units, shut down of a unit for repairs has smaller effect on header volumes and pressure, hence more uniform oil production.

Disadvantages — Larger investment in both suction and discharge line, higher trap pressures to force gas to plant, higher discharge pressures account of pressure drop in lines, leakage losses greater in longer lines, more freezing in lines during cold weather. Small plants on separate leases allow better communication between the plant and wells, also permits more direct gas life operations. The hazards of fire and explosion would only affect the compressed gas supply on a single lease while in a centrally located plant it is possible that several leases might be shut down at one time.

11. What is the maximum distance a centrally located plant can economically serve an area?

Answer: One-half mile (4), one mile (5), two miles (2).

Safety Methods and Appliances

12. In what way is the use of air and gas dangerous in gas lift operations?

In the use of air the greatest danger comes from the possibility of the lubricating oil used in the compressor cylinders vaporizing and forming an explosive mixture. Also, a small amount of gas when mixed with air under pressure is explosive and care should be taken to see that only air goes to the intake of the compressor.

The greatest danger in the use of gas is the fire hazard, although it is possible by pulling a vacuum on the intake system to secure a large percentage of air (through leaks, etc.) with the gas and thus form an explosive mixture.

13. Which is the more dangerous air or gas?

Air (15).

14. Do you use the same lubricating oil on compressors when using air as with gas (actual operations)?

Yes (8); No (7).

15. Give number of air-gas mixture explosions and the reason in each case.

None (3); pulling vacuum on suction (3); lubricating oil (16); air-gas mixture when operating on air (6); broken lines inside of engine room and ignition from engine (3).

16. Give number of "blow-ups" account of equipment. Specify kind of equipment in each case and what pressure did the manufacturer test it at?

None (6); 2-inch line (1); 3-inch flange unions (1000-pound test) (2); collar broke out on 4-inch line (1); rebored high pressure cylinder blew up when operator closed valve on discharge line (1); compressor head failed (2); several cylinders broken from air-oil explosions. Changing temperature and high pressures caused cast iron valves on discharge to fail and standardized on drop forged steel valves (1).

17. What is the test pressure on the fittings which you use on your high pressure lines?

Answer: 1500-pound (4); 2000-pound (10); 4000-pound (1).

18. What gas-air ratio do you con-

Note. The following tabulation gives the computed cost to compress 1000 cubic feet of gas (0-300 lb.) based upon the average values as shown in questions 5, 6, 7 and 8.

Description	Type A	Type B	Type C
Average installation cost per HP (Question 5).....	$103.00	$68.00	$61.00
Average Salvage value per HP (Question 6).....	70%	78%	82%
Average cost depreciation per HP (Computed).....	$30.90	$14.96	$10.98
Average depreciation per HP/day, 3 month period	$0.34	$0.16	$0.12
Average depreciation per HP/day, 6 month period	$0.18	$0.08	$0.06
Average depreciation per HP/day, 9 month period	$0.11	$0.06	$0.04
Average depreciation per HP/day, 12 month period	$0.08	$0.04	$0.02
Average cost operation per HP/day (Question 7)	$0.07	$0.16	$0.22
Average cubic feet of gas per day compressed 0-300 lb. by 1 HP (Question 8).....	4,160	4,160	4,160
Total Compression Cost per 1000 Cu. Ft.			
3 Month period (Computed).....	$0.998	$0.007	$0.082
6 Month period (Computed).....	0.060	0.058	0.067
9 Month period (Computed).....	0.043	0.053	0.063
12 Month period (Computed).....	0.036	0.048	0.058

Natural Gasoline

New developments in the natural gasoline industry are reflected quickly in the news pages of National Petroleum News.

In addition to articles on new uses of the product and the economics of the industry, this publication presents many practical plant operating articles and special technical papers.

In this issue an article by J. C. Chatfield, staff writer, describes a new gas lift-gasoline plant hook-up in the new Oklahoma City field. In the forthcoming issues, other articles will appear to show current trends in plant equipment and building. Others will discuss wider utilization of the industry's products.

Here are 60 articles that have been published in National Petroleum News on natural gasoline since the first of last year:

1929

Present natural gasoline storage insufficient June 5, p. 86
More practical specifications planned May 29, p. 25
Fluctuations in price and demand minimized thru storage May 29, p. 29
Repressuring helps natural gasoline recovery May 29, p. 31
Sampling and gauging of natural gasoline May 22, p. 38
Economic position of natural gasoline May 22, p. 40
Storage at plants should hold 30 days' output May 22, p. 65
Wise building, product control, service, aid marketing May 22, p. 70
1928 output didn't grow as fast as refinery gasoline May 15, p. 34
California surplus competes in East May 8, p. 30
Cost comparison of auxiliary drives at plants Apr. 24, p. 40-f
Builds absorption plant in 28 days Apr. 24, p. 63
Increased demand puts price of natural above U. S. Motor Apr. 17, p. 36
New type scrubber installed in Santa Fe Springs Apr. 3, p. 66
Still most important of absorption plant March 6, p. 72
Surge tank feedings make stabilizer operations smooth Feb. 6, p. 70

1928

Solving absorption problems by analytical method Dec. 26, p. 34
Economic aspect of marketing natural gasoline by-products Dec. 5, p. 119
Manufacturing suggestions for California plants Nov. 28, p. 60
Place of natural gasoline in increasing volatility of motor fuels Nov. 28, p. 61
Cooling problems in natural gasoline plants Oct. 17, p. 99
Economics of operation in modern plants Oct. 17, p. 125
Economic effect of gas lift on gasoline industry Oct. 17, p. 130
The trend of gasoline plant design Oct. 17, p. 136
Use of controls to aid rectification Oct. 17, p. 138
Temperature effect on absorption efficiency Oct. 10, p. 64
N. G. A. adopts specifications for motor fuels Sept. 19, p. 31
Application of gas, gasoline analysis, to plant control Sept. 5, p. 79
N. G. A. adopts Reid vapor pressure test Aug. 29, p. 25
Naturaline Co. and Bureau of Standards study vapor pressure Aug. 22, p. 24
Natural gasoline demand depletes storage Aug. 8, p. 29
Narrow distillation range oils best for gas absorption Aug. 8, p. 54
Determining gasoline vapor pressure by A. S. T. M. distillation test Aug. 1, p. 58
Light fractions from stabilizer offer new opportunities July 25, p. 21
Seminole natural gasoline production to increase July 18, p. 19
All gasolines revised to include doctor test July 4, p. 37
Automatic control in natural gasoline plants June 27, p. 22
Plant makes 3 products from natural gasoline June 27, p. 30
Uses butane in repressuring June 13, p. 68
Four new gasoline plants in Panhandle June 13, p. 92
Doctor test for gasolines on July 1 June 6, p. 45
Gas lock, cause and remedy, found thru N. G. A. research May 30, p. 19
Natural gasoline industry advances May 23, p. 85
Volatility of natural gasoline May 23, p. 88
Gas lift and repressuring relations to natural gasoline May 23, p. 97
Recovery of natural gasoline at gas lift plants May 23, p. 98
Fractionation theory and practice in natural gasoline plants May 23, p. 102
Natural gasoline outlook encouraging May 23, p. 28
Laboratory method of determining gasoline vapor pressure May 16, p. 57
Double stabilizer makes all kinds gasoline Apr. 18, p. 54
Repressuring oil sands cause gasoline plants to close Apr. 11, p. 51
Effect of modern production methods on natural gasoline industry Apr. 4, p. 17
Natural gasoline maker and refiner should cooperate Apr. 4, p. 62
Natural gasoline industry must make new products Apr. 4, p. 74; Feb. 1, p. 49; Jan. 25, p. 17.
Absorption plant can use three pressures March 28, p. 58
Natural gasoline output increased 20% in 1927 March 21, p. 25
Natural gasoline must find wider use Jan. 4, p. 67

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National Petroleum News

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sider explosive at 300 pounds pressure?

Anything in excess of 25 per cent gas-75 per cent air is dangerous but 11 per cent gas-89 per cent air probably the approximate correct ratio for explosive mixture.

19. Do you consider it desirable to install large scrubber tanks of approximately 10,000 gallon capacity as a safety factor against pulling over fluid into the compressors?

Yes (7); smaller tank adequate unless the plant has large capacity (7).

20. Do you always carry the air intake lines to the compressor suction outside of the engine room for all classes of gas fuel internal combustion engines?

Yes (10); No (2).

21. Do you keep your engine rooms well ventilated?

Yes (15).

Surface Lines and Equipment

22. Do you recommend discharging the entire capacity of the compressor plant into a common header and distributing a certain portion of the gas to the wells or do you recommend allocating a certain number of machines to a certain well? State advantages and disadvantages of each system.

(Answers about evenly divided on this question.)

The advantage of a common header is that the total output volume of the compressors is much more effective and thus a more economical utilization. The system is more flexible in allocating the required volume to each well and shutting a machine down for repairs has less effect upon the wells as a whole than it would if connected to one well.

The disadvantage of a common header is that the pressure on the system must be equivalent to or greater than the highest working pressure well. This requires all compressors to discharge at this highest input pressure which lowers volumetric efficiencies in comparison with lower discharge pressures. Another disadvantage is keeping control equipment in operating condition.

It is suggested that a two header system has its advantages and the high pressure breakout header can be used as an auxiliary flowing header in case there are only one or two wells which operate at a higher working pressure than the remainder. Another suggestion is to use a two header system for large compressors and divide machines for small compressors.

23. Do you recommend the use of volume controls or manual control for distributing the gas to the wells from a common header? Give reasons.

In favor of volume controls (8).

In favor of manual control (7).

Volume controls more positive with changing pressures, give better and more economical regulation of gas volumes but require considerable attention, due mainly to corrosion of

working parts, which ofttimes make them impractical.

24. What size lines should be used to conduct the high pressure gas from the plant to the wells assuming 1000 feet as the maximum length of line? Give reasons.

In favor of 2-inch lines (8).

In favor of 3-inch lines (7).

Pressure drop through 2-inch not excessive if the volume of gas passing is under 750,000 cubic feet per day. Larger lines give less trouble from freezing in cold weather.

25. What method do you employ to keep the high pressure gas lines from freezing in cold weather?

Install scrubbers on the discharge from the compressors at the plant; use drips and heaters on the lines; bury the lines; box and insulate the connections at the wells. Several inject daily a small quantity of alcohol into the high pressure lines.

26. Do you find it practical to install a meter on the high pressure lines leading to each well in order to measure the volume of gas going to the well?

Yes (13); No (2).

The reason for installing a meter is to know what you are doing or have done (1).

27. Why should the gas trap be located near the well?

To reduce back pressure at the well head by releasing the rapidly moving oil and gas mixture from the one line into the gas trap as soon as possible. There is excessive slippage and bypassing of gas in a horizontal line that carries an oil and gas mixture.

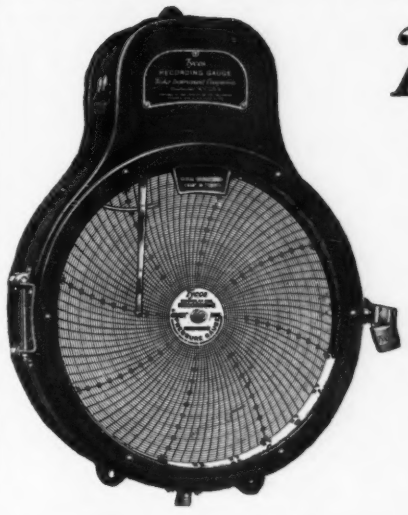
28. Why should the gas trap be elevated?

To allow the oil to flow by gravity to the tank battery and thus enable the operator to reduce the pressure on the trap to practically atmospheric if desirable. Another important reason is to allow the change in direction of the flow line from vertical to horizontal to be made gradual and with as few connections as possible thus increasing the efficiency of the gas as a lifting medium.

29. Can you furnish actual data to show that oil production has been increased by moving the gas trap to the well?

Increased natural flowing well from 5600 to 7200 barrels per day, many others (1); obtained as high as 50 per cent increase in production (1); increase from 450 to 700 barrels per day on one well (1); well at Bowlegs increased from 600 to 750 barrels per day, pressure on flow line reduced from 12 to 6 pounds per square inch (1); Number of cases, one case the well increased 25 barrels per hour (1); 5 cannot furnish actual data; one reports several changes with no benefit; another reports increase in production when wells were flowing naturally but no increase on gas lift wells.

30. What size pipe should connect



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finds extensive application in oil producing, refining and natural gasoline plant operations for recording pressure in oil lines, flow lines from wells, gas lines in the air-gas lift system or in repressuring methods in oil production, compressor discharge lines, steam lines, stills, absorbers, accumulator tanks, gasoline fractionators, refinery cracking units, etc.

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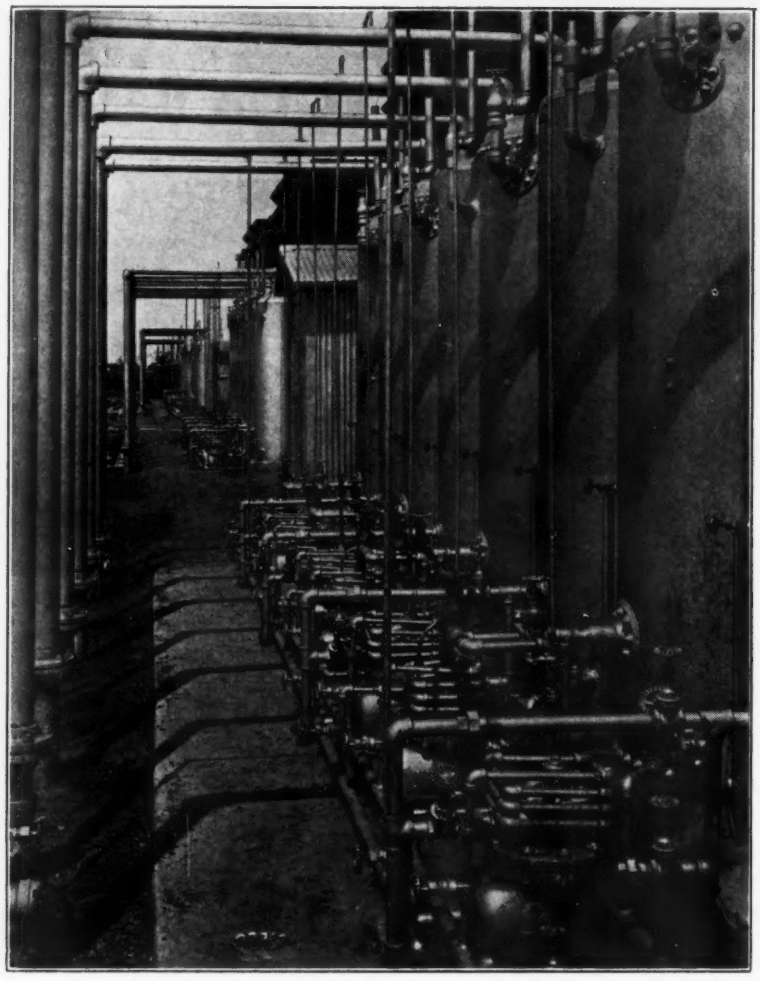

Battery of accumulator tanks at Gypsy Oil Co.'s gas lift plant in the Mission pool

the well to the trap and how should these connections be made?

Same size as well is flowing through although some specify 6⅝-inch. Bends in flow pipe should be gradual, not greater than 45 degrees and should have convex angles.

31. Should a meter be installed on the gas line discharging the gas from the trap at each well? Give reasons.

Six companies do not use them while eight companies do. With input meters in operation, the formation gas-oil ratio can be computed; gives a record of the performance of the wells and especially valuable when finding best operating conditions; it lets you know what you are doing or have done.

32. Should the flow line between the control head and trap have a blow-off or by-pass for breaking out?

Yes, especially with wells requiring high kick-off pressures. By-pass often convenient where repairs are necessary on the trap or flow line. Wells kicked-off with 750 pounds pressure have been flowed into trap by pinching at the well head. One answer specifies a blow-off or vent but not a by-pass.

33. Do you think it advisable to install a check valve in the oil gravity line from the trap? Why?

No (6); yes (9) to prevent the possibility of vacuum pulling air from the stock tanks.

34. Should the proper connections be made at the tank battery so that a separate gauge can be taken on each well?

Yes (12); absolutely (3), individual well production necessary for proper regulation of flowing volume.

Air and Gas as a Lifting Medium

35. Is air or gas preferable as a lifting medium?

Gas (13); air (1) not considering corrosion, gasoline, etc.

36. Does air or gas (considering sulfur content) give the most corrosion trouble?

Air (13); two suggest that air gives most corrosion trouble if salt water is handled with the oil.

37. Is air or gas to be preferred in connection with the efficiency of compressor operation?

Gas (9); air (2); air (volumetric) gas (economic) (1).

38. Is the gravity of the oil decreased more by using air or gas as a lifting medium?

Air (6); gas (2); air only a little worse than dry gas (1).

39. Which is a better lifting medium, recycled gas which has had the gasoline content removed or recycled gas which has only been cooled in the intermediate stage?

Makes no difference (3); in favor of cooling in intermediate stage (2); in favor of removing gasoline content (3).

40. Should the high pressure gas be cooled before it goes to the well even though the condensed gasoline is not trapped out of the line? Give reasons.

Yes (2), it will reduce corrosion and will tend to retain the gravity in the oil; no (11), helps to prevent freezing in the surface lines and eliminates paraffin troubles, warm gas entering the well will tend to heat emulsions so that fair separation of oil and water can be obtained in the trap.

Natural Flow Through Casing

41. Considering a well only during its natural flowing life, would it produce more oil through 5⅜-inch casing or 6⅝-inch casing?

Through 5⅜-inch casing (11); average well 5⅜-inch, large wells 6⅝-inch (1); it would probably produce more oil through the 5⅜-inch casing on account of the formation gas conservation. This, however, is dependent upon the number of wells drilled and the spacing of wells, the rate of decrease and the rock pressure of the field (1).

42. Would the well flow longer through 5⅜-inch than it would through 6⅝-inch?

Yes (15).

43. Have you found cases where increasing the pressure on the trap of a natural flowing well increased the oil production and if so, what was the daily volume of gas if well was cased with 8¼-inch, 6⅝-inch, 5⅜-inch?

No (6); yes (4), one case through 6⅝-inch casing with 5500 barrels oil per day and 5,000,000 cubic feet gas per day; another case through 6⅝-inch casing with 10,000 barrels oil per day and 9,000,000 cubic feet of gas, pressure applied on trap up to 30 pounds increased oil production 10 per cent; another case, through 5⅜-inch with 4000 barrels of oil per day and 4,000,000 cubic feet of gas, production increased to 4250 barrels with 25 pounds pressure on trap; another case, through 8¼-inch casing increase of trap pressure from 25 to 160 pounds decreased gas volume from 7,200,000 to 5,300,000 cubic feet per day and increased oil production from 2100 to 2250 barrels per day.

44. Have you found cases where putting pressure on the trap of a natural flowing well decreased the daily oil production and if so, what was the daily volume of gas if the well was cased with 8¼-inch, 6⅝-inch, 5⅜-inch?

Yes (8); no data on gas volumes.

(*To be concluded next week*)

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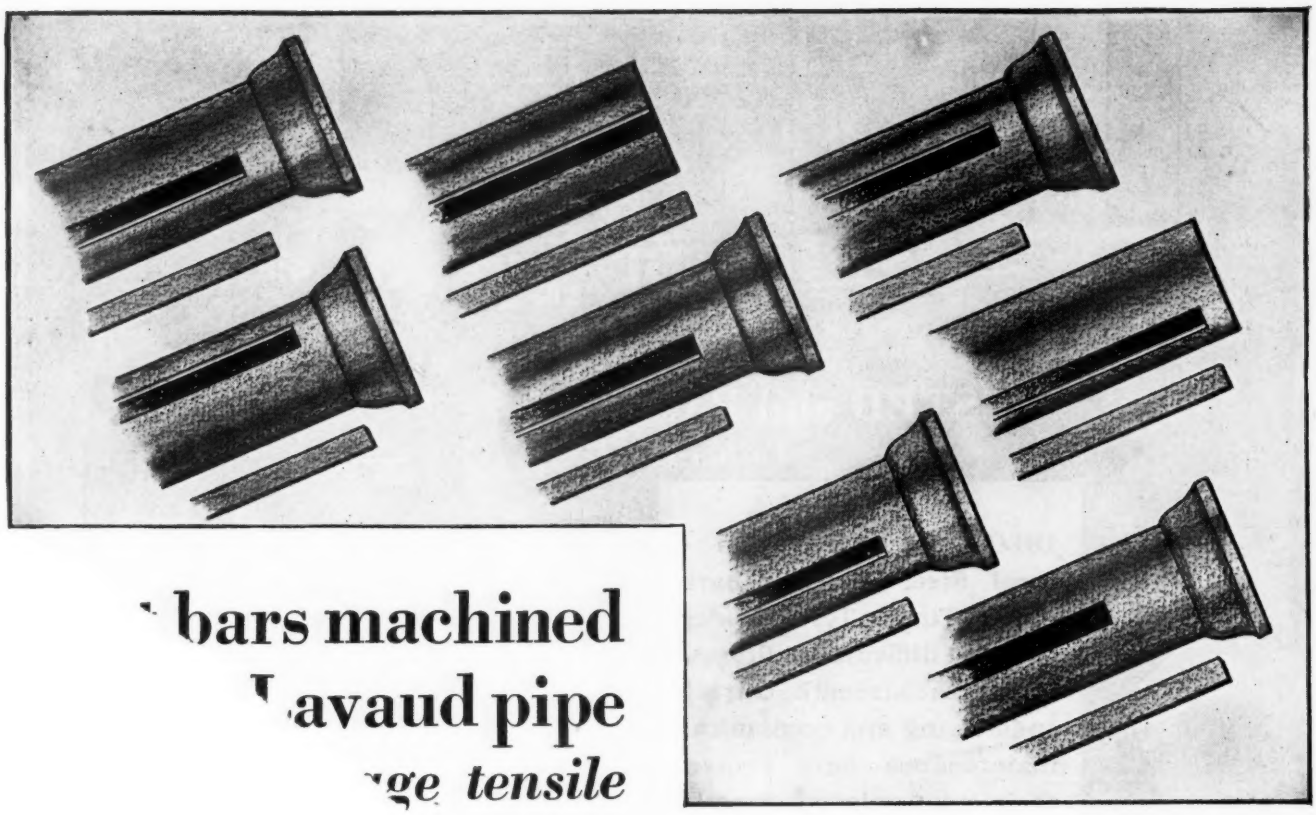

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Salvaging *a* Separator *for* Small Wells *from* Junked Casing

An oil and water separator made from old casing. C. H. Kemp, Tulsa district foreman for The Texas Co., who designed the separator, standing beside it

By John Power
N. P. N. STAFF WRITER

TULSA

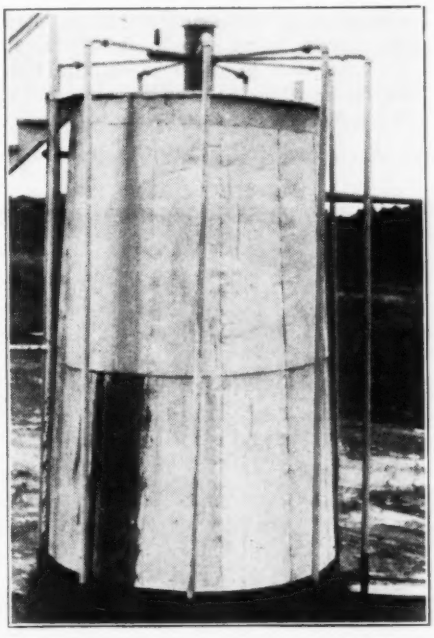
AN OIL and water separator, practically gas tight and cheap enough to be installed on wells of the stripper class, has been developed by C. H. Kemp, Tulsa division foreman for The Texas Co. Made of old casing, or perhaps an old wooden tank, covered with the steel sections of a dismantled steel tank, the home made gun barrels function month in and month out with no attention from the pumper.

Regardless of the materials from which the separator is made, the principle involved in the building is the same. On the inside of the main reservoir, which may be either a joint of large casing, an old tank, or something else, a joint of pipe is set up vertically. Three five-foot slots are cut near the bottom. The inner receptacle is the first to receive the fluid, the lead lines from the wells being connected to it. A heavy wooden top, made of such scrap lumber as abounds on most leases, fits over the liner.

The fluid passes down through the liner and out through the slots, rising in the outer reservoir. Naturally the oil comes to rest on top of the water, from which position it gravitates into the stock tanks. In common with other gun barrels, a water drain is attached, set at such a level as to keep the proper amount of water drawn off the tank.

In the illustrations herewith are pictured two types of the separator. The tall one, standing beside a single stock tank, is made from a joint of 12½-inch casing, set up on a concrete block. The lead lines shown entering it near the top pass through the pipe, and empty into a joint of 6-inch standing on the inside. To the left will be noted the water drain, emptying into a buried line, which takes the water to a central sump. Extending from near the top of the separator over to the stock tank is the oil line.

The larger separator illustrated is made from an old wooden tank, covered with metal sections salvaged from a dismantled steel tank. The lead lines are shown connecting directly with the inner or liner joint, this time 8-inch. The arrangements for removing the oil and water are the same as those on the separator described above. Careful inspection of the picture will show an old standard rig brake band partially buried at the base of the separator, with some five or six inches clearance between the band and base of the tank. This is to catch any fluid which may leak from the tank and run down the sides. No oil or salt water is thus spread around the tank battery, or the gun barrel. It is such devices as this that make The Texas Co. properties models of neatness.



An oil and water separator made from a steel covered wooden tank and a joint of 8-inch. Note the brake band partially buried at the base to catch drippings from leaks

The cost of separators such as these is but little, and they more than justify the small outlay (principally labor) required. Being, to all intents and purposes, gas tight, they have in the past raised the gravity of the oil produced from one to three points. And increased gravity is increased income, an item of major importance on light wells—or on any other kind—for that matter.

Oil, as a necessity and friend of all mankind, is described as such in "Information and Your Job," a handbook put out by the American Petroleum Institute, 250 Park Ave., New York.

New Clamp Lengthens Life Of Oil Field Belts

TULSA

A NEW belt clamp, designed to keep all strain along the central axis of the bolts which hold it in place, has been developed and patented by Hubert D. Collins, of the Gypsy Oil Co.'s engineering department. The first installation, made more than a year and a half ago, has been in operation ever since without a single failure.

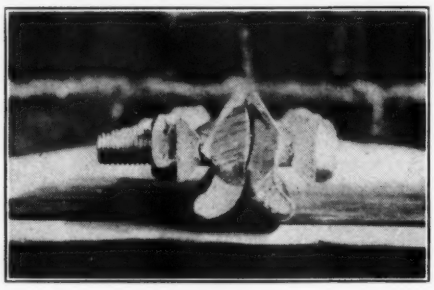
The chief difference between the Collins clamp and those now in general use is in the use of a wedge shaped supplemental clamping member which imparts all strain due to the spread of the clamp along the central axis of the bolts.

The ends of the main clamp plates, where the belt ends enter the clamps, are curved laterally to prevent chafing or cutting the belt. The plates are also curved near the top to increase the friction against the belt ends. A knife edge is provided on the back of the main clamping members. A groove on the inside edge of the supplemental clamps fits over the knife edge on the back of the main clamp, the whole being held in place by ⅝-inch bolts for which both main and supplemental clamps are appertured.

When in use, the knife edges on the back of the main clamps rock in the grooves provided on the supplemental clamps. Thus the associated clamping members and plates automatically adjust themselves with respect to the bolts without producing bending stresses in the latter.

Another feature of the new clamps is their light weight. Heretofore the bolts have been built up in size to furnish the necessary strength, with a corresponding increase in the size of the clamps, until the entire combination weighed about 15 pounds. With the stress entirely along the central axis of the bolts, their resistance to lateral strain is not needed so much, so that both clamps and belts can be considerably reduced in weight. Made of Lynite, an aluminium alloy, the clamp, together with the bolts, which are of duraluminium, another aluminium alloy, weigh about five and half pounds.

This lighter weight is of real importance. Heavy clamps subject the belts to a severe pounding when passing over the pulleys. While at least 75 per cent of all belt trouble is caused by bolt failures, nearly all breaks in the belt itself occur at the clamps. It is natural that a clamp weighing about one third of the ordinary clamp is not going to pound the belts as much as the heavier type.

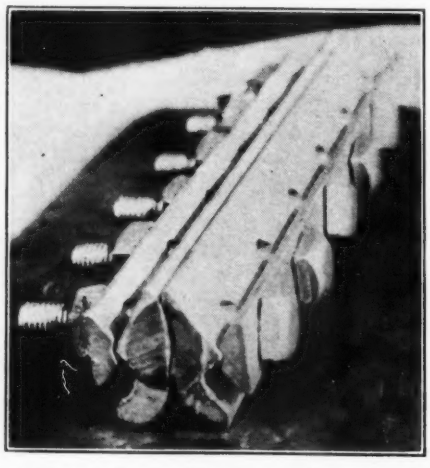


End view of the oil field belt clamp designed to keep all strain along the central axis of the bolts. Note the supplemental clamping wedge

Another troublesome feature which the new clamp is expected to eliminate is "bootlegging" in the belt. By this is meant the admission of air between the belt plys, causing the belt to swell and split.

While bolt replacement costs money, the cost is negligible as compared with the time and production lost when a pumping rig or power is shut down for belt repair. Even the entire loss of a belt, which frequently happens when an outside bolt breaks, is not as great a loss as the time and production. The breaking of an outside bolt allows the clamp to spread on that end, which in turn permits the belt to run over on the clutch or bearing. After an excursion of this kind a belt is never the same, being good, in spots, for gaskets, and in other spots for nothing more than a horrible example of the influence of travel.

As indicative that the source of bolt trouble lay in the clamp, and not in the faulty composition of the bolt, one company had constructed some special alloy steel bolts, which although an improvement over the ordinary bolt, still did not give satisfactory service. In these bolts, the steel consisted of carbon .28-.33, manganese, .60-.80, chromium .80-1.00, sulfur, .04 maximum, phosphorus .04 maximum, Brinell hardness 221.



Overall view of the Collins' clamp. Both clamping members and bolts are made of aluminium

The new clamp can be used either with or without the standard fillers now available.

5544 Oil Permits Have Been Cancelled

WASHINGTON, June 13.—The Department of the Interior has canceled 5,544 applications for permits to prospect for oil and gas and 2,596 permits heretofore issued have also been canceled. The total number of cases acted upon since the present program was inaugurated on March 12 is 18,992, which included 10,852 notices to show cause. This is according to a statement made by the Department.

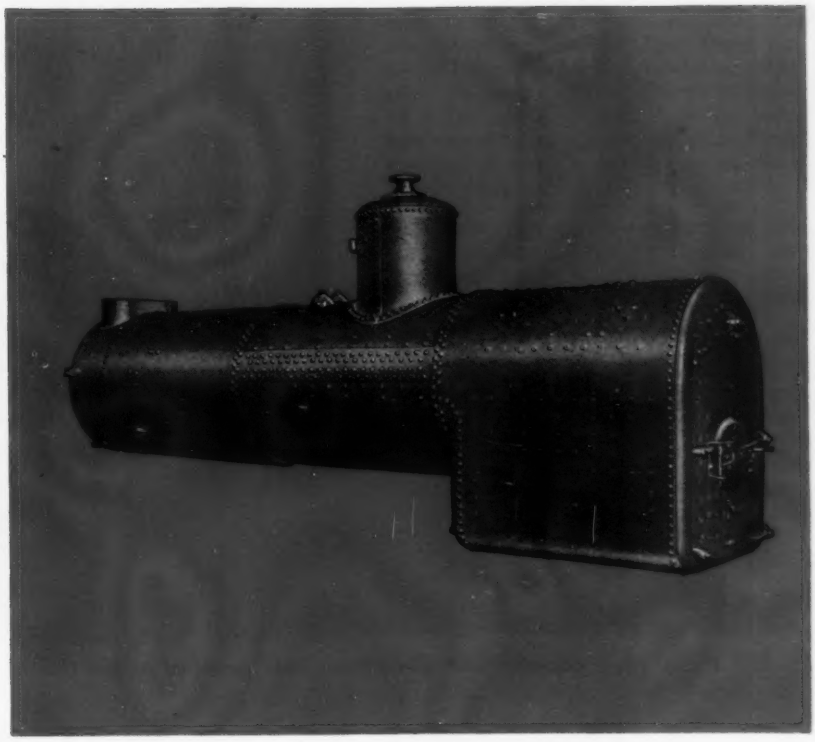
The cancellations have been in 17 states. Extension of time has been granted upon permits and groups of permits in practically all of the western states, especially New Mexico, Colorado, Wyoming, Montana, Utah, Nevada, and California.

In handling these casés the department has, as indicated when the conservation policy of the President was put into effect, it is claimed, endeavored to be just and to meet every reasonable equity. In carrying out this policy, certain classes of equities have been recognized on existing permits. Expenditures for necessary roads, drilling rigs, wells which failed to effect discovery, and other expenditures directly connected with proposed development have been recognized. Where the permittee had been drilling with reasonable diligence but had been unable to comply strictly with the terms of the permit within the allotted time his equity has been recognized. The same has been true where work upon the permit has been prevented by causes entirely beyond the permittee's control.

Appropriate extensions have been granted for group programs already approved when the permittees had proceeded in good faith but had been unable within the time allotted to complete their programs, according to the Department's statement.

More than half of the Irish Free State's petroleum products come from the United States, our exports amounting to 12,630,299 gallons of gasoline in 1928.

FOR 30



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YEAR after year, as drilling methods changed and more difficult drilling conditions were encountered, "Oilwell" Boilers were constantly improved. Today, in every oil field in the world, they are unequalled for steaming qualities and durability.

"Oilwell" Boilers are furnished for 150, 175, 200 and 250 pounds working pressure, with dome located either over the wagon top or over the barrel; also either mounted or unmounted.

914

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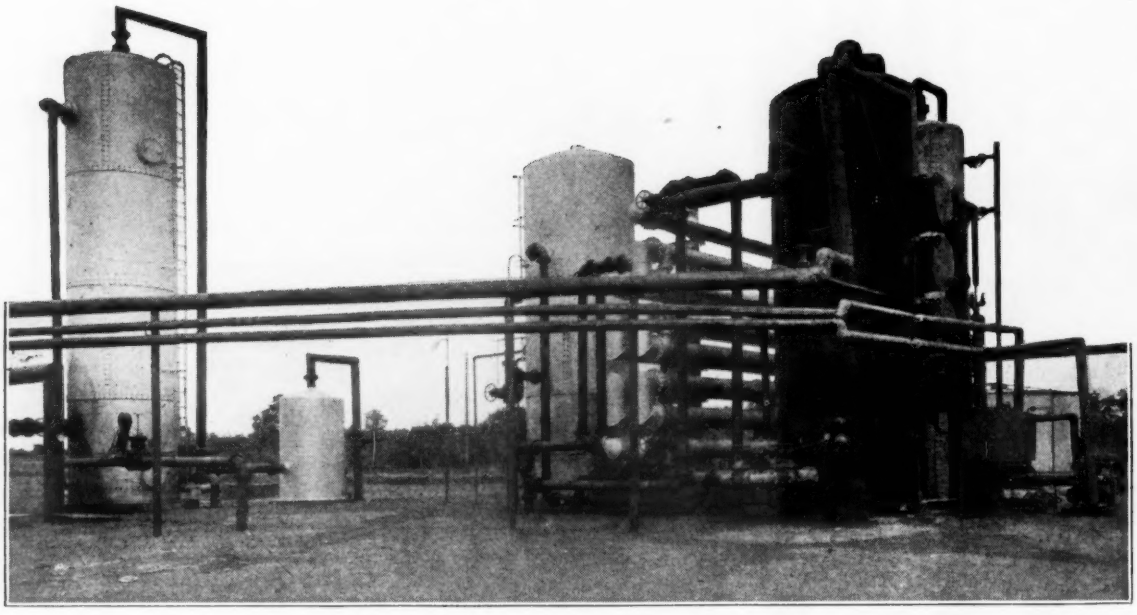


Tulsa Type absorber and distillation unit installed at the Oklahoma City field plant of the I. T. I. O.

Gasoline Plant Is Built Adjustable To Fit Needs of New Pool

By J. C. Chatfield
N. P. N. STAFF WRITER

OKLAHOMA CITY

THE utmost in flexibility was the aim of engineers of the Indian Territory Illuminating Oil Co. in designing the combination gas lift and natural gasoline plant which has been built in the Oklahoma City field.

As this is written the Oklahoma City field still is a one-well pool. Present functions of the plant are simple. But as more wells are brought in and the field becomes older the plant will be called on to render more varied services. With Seminole experience as a background the company engineers have built a plant which can be switched to any type of service with minimum delay, without loss of gasoline production and with a minimum number of power and compressor units.

At present the plant consists of a 20,000-gallon Tulsa Type absorption plant and three 190-horsepower engines with suitable cooling coils and accumulators for collecting gasoline which may be produced as a by-product of gas-lift operations.

By simple valve manipulations the plant may be made to function in almost any way which the engineers imagined might be required. For example:

Gas from the field may be passed through the absorber under well pressure, picked up by the compressors and returned for fuel purposes or flowing service. It may be boosted to suitable pressure for delivery to commercial gas lines if a market should develop. It may be compressed to 1000 pounds or higher and be used for kick-off service on gas lift wells.

In case well pressures on the casinghead gas decline it will be possible to pull the raw gas direct to low stage compressors. From these it may pass to the absorber and thence direct to the field or back through the high stage compressors and thence to commercial lines, flowing lines or kick-off service.

If gas production mounts rapidly with the completion of new wells it will be possible to operate the compressor plant with its coolers and accumulators as a compression plant and use the absorption plant to take care of excess gas pending the installation of additional compressor equipment. The company has completed plans for expansion of the plant but will not undertake the work until it has more indication as to the needs which may develop.

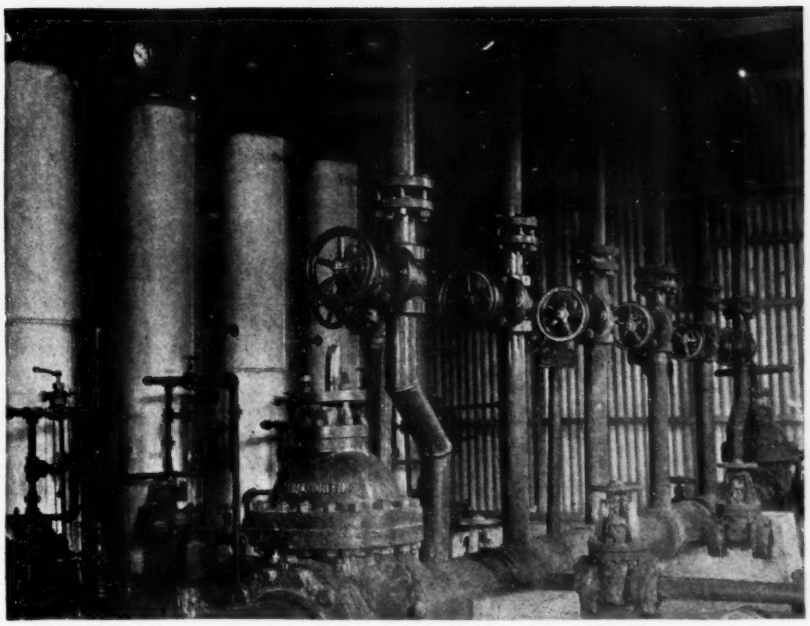
At the present time the I.T.I.O. discovery well is being held under 40 to 50 pounds back pressure. Gas from the well passes through the absorber under that pressure after coming through the three field scrubbers. Pressure reduction is just ahead of the compressors.

At atmospheric pressure the gas from the Oklahoma City well carries about 1.5 gallons per 1000 cubic feet. With a back pressure of 40 to 50 pounds the gas tests about .75 gallon per 1000. In the past the well has been operated under a back pressure as high as 90 pounds per square inch. Under that pressure the gas yield was down to .5 gallon per 1000.

The Oklahoma City well now is making about 4,500,000 cubic feet of gas per day. Of this 2,500,000 cubic feet is formation gas and 2,000,000 is recycle gas returned to the well under about 240 pounds pressure. The gas not returned to the well is used for drilling and other purposes in the field. It is supplemented by gas obtained from some of the prolific dry gas wells which have been drilled to the upper sands.

FROM low stage cylinders of the compressors the gas passes through Griscom-Russell coolers and to 7-foot by 20-inch accumulators. The outlet line from the top of each accumulator leads to a T. From the T one line leads to the high stage intake.

The other line leads to an 8-inch low stage header from which gas



Interior of accumulator house, showing connections from accumulators to low stage header

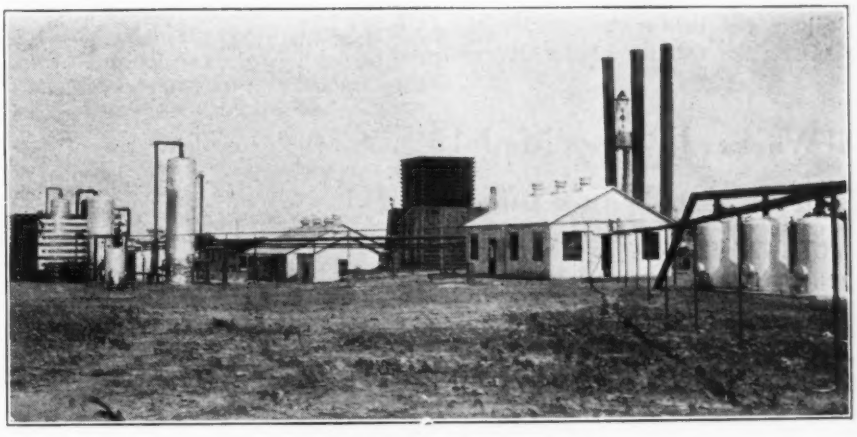
may be withdrawn direct to the field for flowing service or fuel. Lines are manifolded, as mentioned previously, so that gas from this header may be run to the absorber before going to the high stage compressor.

Gas from high stage cylinders passes through the coils to the high pressure accumulator and out, as indicated in an accompanying sketch. The outlet line is arranged so that the gas may pass to the 8-inch low stage header and be led through orifice meters on various lines from the header.

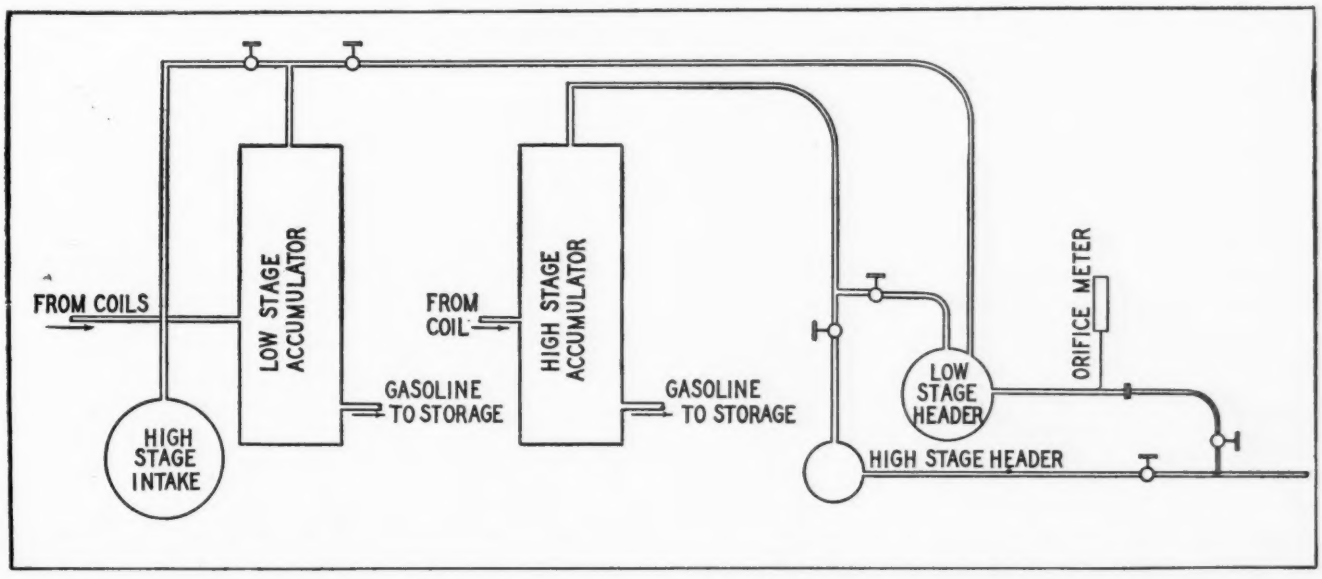
By closing the valve to the 8-inch header and opening another, the gas may pass direct to a 3-inch high stage header. This line may be used merely to by-pass the orifice meter and 8-inch header or it may be used for kick-off service. If high pressures are desired to break out a well it will be possible to block off all except one outlet line from the 3-inch high pressure header. With such an arrangement pressures could be built up to 1000 pounds or more and the whole high stage compressor energy of the plant be applied to a single well.

At the present time two of the 190-horsepower twin units are equipped with low stage cylinders only. The third has one low and one high pressure cylinder. All machines, however, have been set up so that one low pressure cylinder may be replaced with a high stage cylinder with only a short shut-down. All lines from the high stage side and all fittings are designed for high pressure service, even though they may be connected to a low stage cylinder at the present time.

The intake line to one cylinder on each machine has been flanged so that the low pressure intake line from the cylinder to the flange can be



General view of plant



Diagrammatic drawing, showing arrangement of headers and accumulators for various types of plant operation

taken down and replaced with a bull-plug.

When the engines were set up, a high pressure intake line was laid to the normal high pressure cylinder, even though a low cylinder was installed. At the floor of the engine room the intake line was plugged. To avoid delays in installing high pressure cylinders all connections were made up and are kept in the warehouse ready for use.

At the present time one unit is operating two low stage cylinders. Another unit with both a low and high stage cylinder is being run as a high stage compressor exclusively. The low stage cylinder is carrying no load, allowing the entire power developed by the engine to be used in the high stage service. In this manner the high stage capacity of the plant has been doubled, without adding any additional high stage cylinders. This is a temporary use only since extended operation in this way would be hard on the machine.

The design of this plant was worked out under the direction of T. A. Stevens, superintendent of construction and gas lift operations for the I.T.I.O. in the Oklahoma City district.

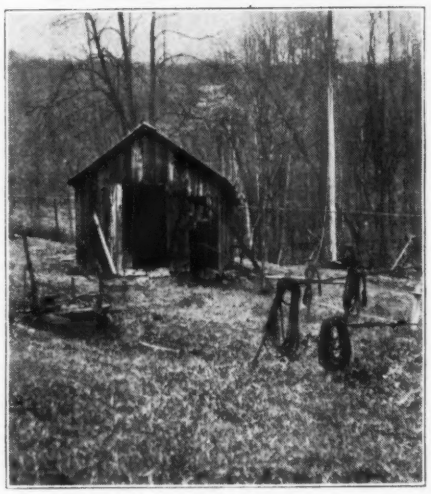
Oil Worker Is Given Medal For Saving Man's Life

TULSA, June 15.—The presentation of the first president's medal of the National Safety Council to an oil field worker for saving a comrade's life was made quite an event at Eldorado, Kan., May 17 when the medal and certificate were given to A. Lovern, an employe of the Sinclair Oil & Gas Co.

The presentation was made at a mass meeting held under the auspices of the Chamber of Commerce. A program of music by the Skelly orchestra and speeches preceded the presentation.

Mr. Lovern on Dec. 10, 1928 saved the life of William H. Frankhouse after the latter flipped a rig guy wire against a high voltage electric line. Mr. Lovern used the Schaefer prone pressure method of resuscitation.

The accompanying picture shows, left to right: Frank Powden, foreman; John R. Dray, who was knocked unconscious, regained consciousness and crawled to the tool house for aid; Arch Lovern, who saved the life of the man to his right, William Frankhouse.



Power house and bailing lines on Bradford district lease

Old Time Bailing Plan Is Being Discarded

BRADFORD, Pa., June 15.—Illustrated in the accompanying picture is a method of production peculiar to the Bradford district and which will not much longer be found there. It originated many years ago and at one time there were a number of such installations in the field.

It is a bailing method, used on wells whose production was not great enough to justify steady pumping. The picture shows the small building housing the machinery for lifting the bailer and in the foreground are several bailing lines. manila, coiled and hanging on stakes.

Each of these lines runs to a different well, passing through a sheave on the top of a pole tall enough to give the altitude required to carry the line across the brush to sheave at the well. One of the poles can be seen just back of the building and to the right. Each resembles a Maypole, with several lines dangling from its top.

Inside this building is a steam engine belt connected to what looks like a pair of bull wheels. One master cable runs from the drum to the block anchored in front of the building. The end of the master line can be quickly connected to any one of the individual well lines, change in direction being accomplished by means of the sheave on the ground. The process of bailing a well is simple. The master line is connected to one of the well lines. The clutch is thrown out in the house, the weight of the bailer as it descends in the well spooling out the line. When the bailer reaches bottom, the engine is engaged and the line reeled in.

With the present intensive flooding under way, increasing production and calling for constant pumping of the producing wells, it will not be long until all these old-time methods will have passed out.

Kettleman Hills Gas To Be Marketed

LOS ANGELES, June 15.—Central California towns are due to be supplied with natural gas from the Kettleman Hills oil field if present plans of a newly organized $1,000,000 company are successfully completed.

Paul Kayser, of Houston, Texas is reported to be the president of the new company with P. S. Marron, Oakland attorney, Gordon Johnson and Marguerite Filben, of San Francisco, named as directors.

This company together with the Pacific Gas and Electric Co. will take care of future production of natural gas from Kettleman Hills. The P. G. & E. Co. will run the pipe line, it is now building from Buttonwillow Ridge to San Francisco, via Kettleman Hills so as to connect up with this promising area.

Frank Powden, foreman; John R. Dray, who was knocked out came to and crawled to tool house for aid; Arch Lovern responded and saved the life of Wm. Frankhouser, the victim

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Sizes 2 inch to 13⅜ inch O. D.
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CASING
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LINE PIPE
DRIVE PIPE
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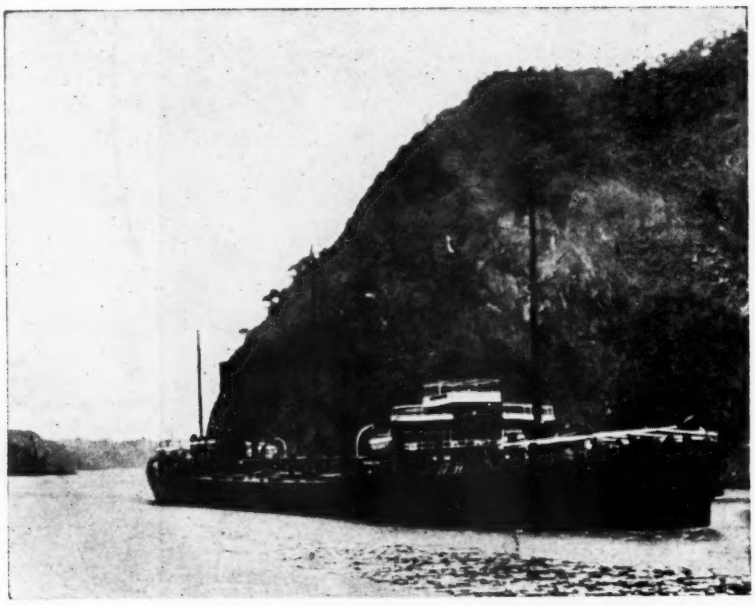
ETNA



Tanker passing through Panama Canal

30,000,000 Bbls. of California Gasoline Through the Canal in '29

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON

CALIFORNIA gasoline shipments may exceed 30,000,000 barrels through the Panama Canal in 1929. In any event they are certain to set a new record for volume.

Definite commitments of shipping companies exceed 26,300,000 barrels, as compared with total movements through the canal in 1928 of 25,226,000 barrels, a record of the past.

Most commitments represent intercompany business such as General Petroleum Corp. supplying the parent Standard Oil Co. of New York; Associated Oil Co. shipping to the Tide Water Associated Oil Co.; The Texas Co. shipping to itself, and so forth.

There are outside movements, however, as represented in Union Oil Co. of California sales to Atlantic Refining Co.; Standard Oil Co. of California shipments to large eastern buyers; and Richfield Oil Co.'s general sales, in addition to supplying its expanding eastern outlets. Richfield recently bought the Walburn Petroleum Corp., and has acquired other outlets in New England, New York, New Jersey, Pennsylvania and Maryland, shipping in its own tankers.

Gasoline shipments through the canal in the three months period of 1929 totaled 7,528,000 barrels, according to the U. S. Bureau of Mines. The 5,108,000 barrels shipped to Atlantic Seaboard destinations compared with 3,132,000 barrels shipped in the corresponding period last year, an increase of 63.09 per cent. Atlantic foreign shipments through the canal totaled 2,420,000 barrels, compared with 1,442,000 barrels, an increase of 67.82 per cent.

Information based on California port records indicated April shipments had increased to Atlantic Seaboard destinations to nearly 68,000 barrels daily for the first four months of 1929 as compared with 56,750 barrels daily average shown by Bureau of Mines figures for the first quarter.

The following average movements of gasoline by companies through the canal in Intercoastal and Atlantic foreign traffic in the first quarter of 1929 were:

Company	Gasoline Barrels Daily	All Products Barrels Daily
Standard	9,900	9,900
Associated	7,000	9,000
Union	9,600	14,350
Shell	22,600	25,200
General	11,700	21,700
Texas	6,000	6,000
Richfield	10,650	17,250
Miscellaneous	6,200	6,200
TOTALS	83,650	109,600

Intercoastal gasoline commitments for 1929 are known to approximate 16,150,000 barrels. Last year total gasoline shipments were 16,778,000 barrels. Atlantic foreign port commitments on gasoline approximate 10,150,000 barrels. Fuel and gas oil commitments total 4,600,000 barrels, of which intercoastal contracts will take 3,525,000 barrels and export 1,075,000 barrels. Refinable crude commitments amount to less than 500,000 barrels.

Western exports, that is to say, shipments to Asia and Pacific destinations, totaled 1,710,000 barrels in the 1929 first quarter as compared with 1,542,000 barrels a year ago, or an increase of 10.89 per cent. Their total throughout 1928 was 6,798,000 barrels.

An indicated increase of 9.53 per cent in domestic demand for California gasoline was shown in first quarter compilations made of Bureau of Mines reports. This demand reached 9,312,000 barrels as compared with 8,502,000 in the corresponding period last year. For the whole of 1928, the indicated domestic demand was 39,601,000 barrels.

Indicated total demand, including both domestic consumption and cargo movements to all destinations, amounted to 18,550,000 barrels in the 1929 first quarter, as compared with 14,618,000 barrels a year ago. For the

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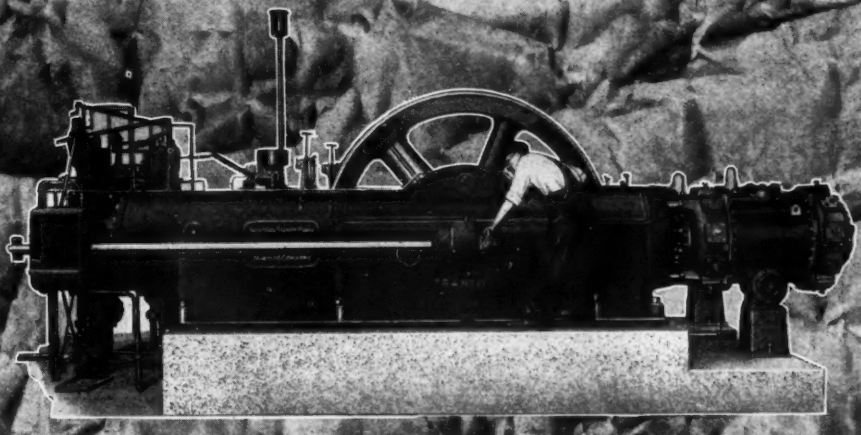
17x24" Gas Engine Compressor



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whole of 1928 indicated total demand was 71,625,000 barrels.

California refineries averaged runs of crude to stills of 622,200 barrels daily, in the first quarter of 1929, compared with straight run capacity for handling 915,010 barrels daily, the last mentioned total accounting for 000 barrels compared with 15,301,000 barrels, or an increase of 33.25 per cent in the 1929 first quarter. For the whole of 1928, the California total gasoline recovery was 66,914,000 barrels.

The total California gasoline recovery in 1928 represented 17.74 per

Pacific Intercoastal Shipments Through Panama Canal*

(In Barrels of 42 Gallons)

Year	Crude	Gasoline and naphtha	Gas oil and fuel	Lubricating oil	Miscellaneous†	Total refined
1920	170,000	77,000	60,000	330,000	.....	467,000
1921	.....	.....	216,000	407,000	.....	623,000
1922	2,306,000	263,000	.....	153,000	121,000	537,000
1923	52,350,000	2,152,000	639,000	341,000	237,000	3,369,000
1924	39,300,000	2,696,000	946,000	559,000	1,114,000	5,315,000
1925	14,545,000	10,280,000	1,649,000	526,000	1,577,000	14,032,000
1926	12,666,000	8,475,000	11,286,000	479,000	447,000	20,687,000
1927	10,692,000	11,675,000	11,207,000	355,000	.....	23,237,000
1928	2,300,000	16,778,000	3,352,000	335,000	263,000	20,729,000

†Mainly tops.
*United States Bureau of Mines figures.

all plants in the state except pressure still installations. The total cracking capacity of the state amounts to 157,000 barrels daily, a combination of all types of equipment giving California more than 1,000,000 barrels of capacity.

Compilations from Bureau of Mines reports show California increased its refinery runs of crude 13.81 per cent in the first quarter of 1929 as compared with a similar period last year. Crude runs totaled 55,997,000 barrels as against 49,204,000 barrels.

Runs of crude for the full year of 1928 totaled 210,758,000 barrels. If maintained throughout 1929 at the refining rate of the first quarter the California runs of crude this year would reach nearly 227,000,000 barrels.

Realization figures show straight run recovery of 14,278,000 barrels in the 1929 first quarter as compared with 10,602,000 barrels in the corresponding period of last year and 47,567,000 barrels for the whole of 1928.

Quarterly figures mentioned indicate a 34.67 per cent increase in the 1929 period. The percentage recovery on crude was 25.5 per cent in the 1929 period as against 21.55 per cent in the 1928 first quarter and 22.57 per cent average over the whole of last year.

Cracked gasoline in the 1929 period totaled 2,501,000 barrels as against 1,808,000 barrels in the 1928 first quarter, an increase of 38.33 per cent. California recovery for the whole of 1928 was 7,205,000 barrels.

Natural gasoline recovered was 3,610,000 barrels in the 1929 first quarter compared with 2,891,000 barrels in the 1928 period, a 24.87 per cent increase; in all 1928 12,142,000 barrels were recovered.

Total gasoline recovery of 20,389,cent of the total for the United States. In the first quarter of 1929 it represented 20.38 per cent of the United States total.

U. S. total recovery for 1928 was 377,183,000 barrels. For the first quarter of 1929 it was 100,066,000 barrels as against 84,113,000 barrels in the corresponding period last year.

California gasoline stocks at the end of the 1929 first quarter had increased 2,372,000 barrels over Jan. 1 to 11,293,000 barrels. In the corresponding period of 1928 they increased only 798,000 barrels, but to the high level of 13,591,000 barrels. Drafts on stocks later in the year brought them down to 8,921,000 barrels, Jan. 1, 1929.

Total United States stocks of gasoline at the end of the 1929 first quarter amounted to 47,205,000 barrels, an increase since Jan. 1, 1929, of 14,139,000 barrels. At the end of a similar period last year they totaled 41,078,000 barrels.

By regions, stocks were divided as follows:

Gulf and Atlantic Seaboard plants made first quarter runs of 90,721,000 barrels of crude for straight run gasoline recovery of 18,318,000 barrels of gasoline at a refinery yield rate of 20.19 per cent. In a similar period of 1928 crude runs totaled 85,163,000 barrels, yielding 16,076,000 barrels of gasoline at a recovery rate of 18.88 per cent.

Cracked gasoline increased 7.83 per cent in the Gulf and Atlantic Seaboard region from 12,706,000 barrels to 13,701,000 barrels. Natural gasoline increased 28.53 per cent from 3,032,000 barrels to 3,897,000 barrels. Total gasoline refined showed 12.89 per cent increased from 31,814,000 barrels to 35,916,000 barrels.

The Interior region increased its 1929 first quarter runs 14.88 per cent from 73,853,000 to 84,846,000 barrels. Straight run recovery increased 19.58 per cent from 21,774,000 to 26,037,000 barrels. Cracking yields were increased 20.23 per cent from 12,673,000 to 15,237,000 barrels. Natural gasoline recovery declined 2.51 per cent from 2,551,000 to 2,487,000 barrels. Total interior recovery increased 18.28 per cent from 36,998,000 to 43,761,000 barrels.

For the entire United States, totals covering the three months period show crude runs to stills of 231,564,000 barrels against 208,220,000 barrels in the corresponding period last year, an increase of 11.21 per cent.

Straight run recovery was 58,633,000 barrels, or 25.42 per cent on crude. This compared with 23.27 per cent recovery, representing 48,463,000 barrels in the first quarter of 1928.

Cracked gasoline increased 15.64 per cent from 27,187,000 to 31,439,000 barrels in the 1929 first quarter. Natural gasoline increased 17.94 per cent from 8,463,000 to 9,994,000 barrels. Total gasoline increased 19.67 per cent from 84,113,000 to 100,066,000 barrels.

New Books

A MANUAL covering the cleaning and lubrication of automobiles, written by L. E. Noble and J. A. Roenigk, instructors in the vocational division of the Cleveland public schools, has been published by the McGraw-Hill Book Co. as one of its series of vocational texts. Its title is, "Cleaning and Lubricating, a Unit of Instruction Manuals for Automobile Mechanics."

This manual is the first of a set of twelve on automobile maintenance these authors are preparing and is of particular interest to oil companies that are operating lubrication stations, as a guide in instructing new employes and as a reference book.

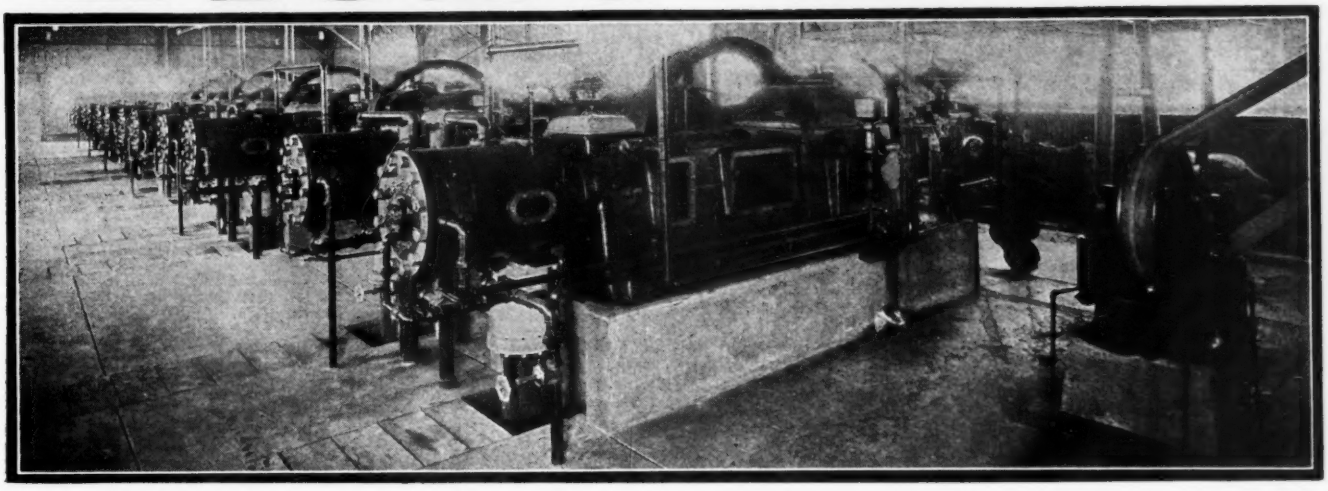
The manual contains 77 pages which have a type size of 6 x 9 inches. It is illustrated with line drawings.

Treatment of the subject is like the treatment given other subjects in laboratory manuals. There are a list of tools and materials required for each job or operation, the best method of procedure, and often a note of caution against what not to do. Appended to each section covering a certain operation, is a list of questions drafted to impress the subject more deeply into the minds of the student or new employe.

The manual is divided into four general chapters: one on chassis lubrication, the second on engine lubrication, the third on body and chassis cleaning, and the fourth on cleaning engine auxilary systems. It is indexed for quick reference.

The price is $1 and may be obtained through NATIONAL PETROLEUM NEWS, 1213 W. 3rd St., Cleveland.

1949
1939
1929



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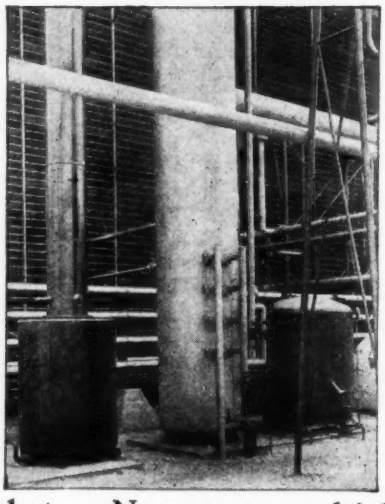

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New Patents

Prepared by R. E. Burnham, patent and trade-mark attorney, Continental Trust Building, Washington, D. C., from whom copies may be obtained at the rate of 20c each. State number of patent and name of inventor when ordering.

June 4, 1929

REFINING

Apparatus for treating hydrocarbons—Luis de Florez, Pomfret, Conn., assignor to Texas Co., New York, N. Y. Filed July 8, 1919. No. 1,715,643.

Process of cracking oil—John C. Black, Destrehan, La. Filed Oct. 20, 1926. No. 1,715,980.

Process of refining mineral oil—Henry Blumenberg, Jr., Los Angeles, Cal. Filed Jan. 12, 1927. No. 1,716,103.

Apparatus for the conversion of hydrocarbons—Lyman C. Huff, Chicago, Ill., assignor to Universal Oil Products Co., same place. Filed Feb. 23, 1924. No. 1,716,136.

Process and apparatus for treating oil—Carbon P. Dubbs, Wilmette, Ill., assignor to Universal Oil Products Co., Chicago, Ill. Filed Oct. 6, 1920. No. 1,716,306.

PRODUCTION

Spear—Ercole Ventresca, Houston, Tex. Filed July 13, 1928. No. 1,715,481.

Well apparatus—Nelson K. Smith, Los Angeles, Cal., assignor to Gulberson Corporation, Dallas, Tex. Filed Nov. 8, 1926. No. 1,715,576.

Casing-shoe nozzle—Joseph Le Flore, Garden Grove, Cal. Filed Dec. 17, 1927. No. 1,715,767.

Casing-head appliance for oil wells—John D. Lemex, Tulsa, Okla. Filed June 24, 1927. No. 1,715,846.

Well-screen—Joseph H. McEvoy, Jr., Houston, Tex. Filed Jan. 28, 1927. No. 1,715,856.

Tubing-anchor—Otho S. Shaw, Port Arthur, Tex. Filed April 6, 1925. No. 1,716,245.

Pump-rod attachment—William C. Smith, Corsicana, Tex. Filed Dec. 6, 1926. No. 1,716,247.

MISCELLANEOUS

Grease-pump—William S. Townsend, Rochester, Pa., and Charles Spaeth, Cleveland, Ohio, assignors to Wayne Pump Co., Baltimore, Md. Filed Sept. 5, 1925. No. 1,715,522.

Process of revivifying spent clarifying and decolorizing agents—Marvin L. Chappell, Los Angeles, Cal., assignor to Contact Filtration Co., San Francisco, Cal. Filed March 24, 1926. No. 1,715,535.

Liquid-dispensing apparatus—Frederick W. Delanoy, Rochester, Pa., assignor to Wayne Pump Co., Baltimore, Md. Filed Nov. 8, 1924. No. 1,715,539

Gasoline-dispensing device—Percy W. Hodgkinson, St. Petersburg, Fla., assignor to Wayne Co., Fort Wayne, Ind. Filed July 8, 1925. No. 1,715,551.

Liquid-dispensing apparatus—Earl E. Eickmeyer, Dayton, Ohio, assignor to Wayne Co., Fort Wayne, Ind. Filed Mar. 14, 1925. No. 1,715,552.

Liquid-dispensing apparatus—William F. Brandt, Fort Wayne, Ind., assignor to Wayne Co., same place. Filed May 26, 1926. No. 1,715,553.

Liquid-dispensing apparatus—Arnold P. Hitzeman, Fort Wayne, Ind., assignor to Wayne Co., same place. Filed June 16, 1926. No 1,715.554.

Dewaxing lubricants by double centrifuging—George F. Olsen, Los Angeles, Cal. Filed Oct. 15, 1927. No. 1,715,670.

Method of simultaneously separating mixed liquids of different boiling points and generating power—Clarence F. Hirshfeld, Detroit, Mich. Filed Mar. 6, 1922. No. 1,716,130.

Pump—Byron J. Pepper, Fort Wayne, Ind., assignor to S. F. Bowser & Co., same place. Filed April 23, 1921. No 1,716,147.

Composition of matter and method of making it (motor fuel)—Joseph H. James, Pittsburgh, Pa. Filed Feb. 3, 1922. No. 1,716,272.

Xanthate Mixture—Joseph H. James, Pittsburgh, Pa. No. 1,716,273.

Lubricating composition—George W. Gray, New York, N. Y., assignor to Texas Co., same place. Filed June 8, 1927. No. 1,716,310.

CLEVELAND, June 14.—The conference of state premiers of Australia has recommended that the net duty on gasoline should be increased from threepence to fourpence per gallon. The money is used for road purposes. The U. S. Department of Commerce reports strong opposition in Australia to the move.

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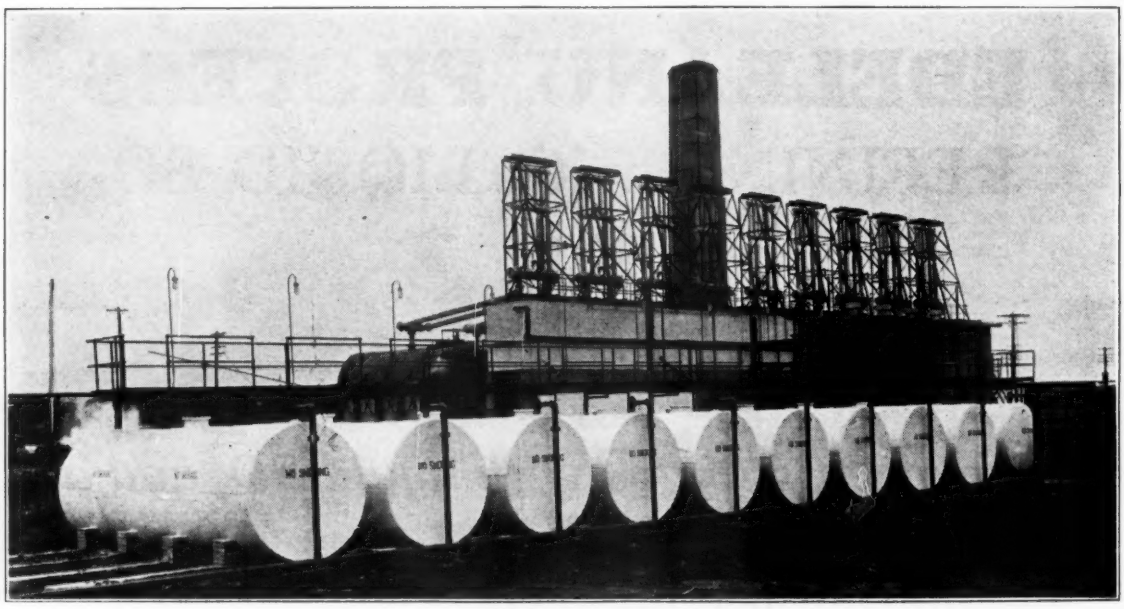

Battery of Slagter cracking stills at Transcontinental refinery

FORT WORTH

By Paul Truesdell
N. P. N. STAFF WRITER

Article 2

MUCH of the equipment in the Fort Worth refinery of the Transcontinental Oil Co. has been designed and built by Transcontinental engineers. There is a minimum of standard equipment except, of course, such things as stills, boilers, refrigerating machinery, wax house equipment and so on.

Many of the steps in the various stages of processing are unusual and as far as my knowledge goes, are original with this organization.

The cracking process used at the Fort Worth plant as well as the company's other two refineries is the invention of the general superintendent of refineries, A. J. Slagter, and bears his name.

In fact, proofs of the ingenuity of Mr. Slagter, and his associates are to be seen everywhere in the refinery.

Two pipe stills used for crude distillation are of Transcontinental design. A bubble fractionator is another feature. It cannot be called a bubble tower because it is made up of horizontal sections of pipe fastened together and containing rows of bubble caps over which the liquid flows.

The heat exchanger system by which the heat of the vapors is transmitted to the crude coming into the system is unlike any I have ever seen before, in its details.

The distillation operation is continuous from the introduction of the cold crude at one end of the system to the pumping out of steam refined cylinder stock at the other. The accompanying table shows the analysis made in the plant laboratory, of the crude on which the refinery operates.

Ranger Crude Oil

Gravity 38.6

Products	Per Cent	Grav.	I. B. P.	10%	20%	50%	90%	E. P.
Gasoline	31.3	57.0	126	187	212	261	360	430
Kerosene	16.4	42.3	358	384	396	437	526	606
Gas oil	19.7	35.3	464	508	524	568	671	745

	Gravity	Flash	Fire	Cold	Vis.	Color
Kerosene	42.3	155	185	.....	.....	.....
Gas oil	35.3	235	275	.....	44	2½
Wax distillate (15 per cent)	29.1	345	400	70	109	4½
Stock (15.9 per cent)	20.2	520	600	45	191	dark green

The primary crude distillation equipment consists of two pipe stills of unusual design and three shell stills. As before stated, the pipe stills were designed by company engineers. The tubes are enclosed for their full length in the furnace, with the insulated return bends extending out through the end walls.

They are fired into Dutch oven fireboxes and the furnaces are baffled so that the products of combustion are given two passes, traveling to the rear of the still, over a baffle and back to the firing end where they pass into a stack common to the two stills.

The vapor line on every shell still in the plant is a heat exchanger. Those on the gasoline lines are of the drum type, the hot vapors passing through a small drum in which are nests of tubes through which the crude oil passes countercurrent. Those on the heavy oil vapor lines are more like the conventional shell and tube exchangers although they were designed and built in the plant.

The vapor line from each heavy oil still is double, a straight nipple rising a couple of feet above the vapor dome to a yoke or T from which two branches, each consisting of a large section of cast iron pipe flanged into the line, extend for 20 feet or so to be joined through another yoke to a single line which runs to the receiving house. This double line gives the incoming crude two passes on each still to pick up

(*Continued on Page* 82)

wants in obtaining the gasoline he needs

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(*Continued from Page* 78)

heat. It goes down one line and up the other.

The cold crude on the way to the still battery is pumped first through the gasoline vapor heat exchangers, the coolest of course and, then through the kerosene vapor lines. From there it passes through a liquid to liquid heat exchanger in counter flow to the cylinder stock being pumped out from the last still of the reducing battery.

The liquid to liquid exchanger is interposed in the system at this point, Superintendent Sonricker explains, chiefly to make use of the comparatively cool crude to reduce the temperature of the stock to make handling of it easier. From the cylinder stock heat exchanger the crude passes progressively through the double heat exchangers on the gas, oil and wax distillate streams.

The crude then enters the pipe still at a temperature of about 315 F. The pipe stills are operated in parallel, the crude stream being split between them.

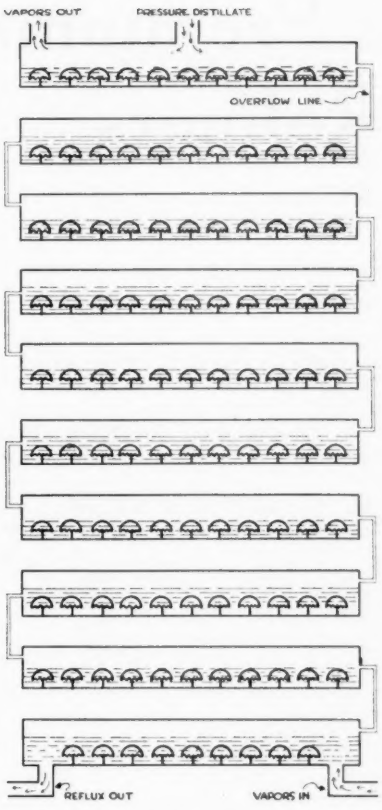
From the pipe still the liquid and vapors pass into a flash tower. The bottoms in the flash tower, that part of the crude that does not vaporize, from which the lubricating stock is of course forms the raw material made. Its course will be traced in the next article.

Vapors pass overhead from the horizontal bubble fractionator already mentioned. This consists of 20 sections of pipe about 20 feet long, arranged in pairs. The pipes in the bottom pair are 18 inches in diameter and the others are 15-inch. Several bubble caps are set in each of the pipes. An accompanying drawing shows the design of the fractionator.

The scrubbing medium in the fractionator is the pressure distillate from the cracking unit. In this way a double purpose is served, the pressure distillate is rerun without special equipment to make cracked gasoline and the temperature of the tower is kept uniform. When there is not enough pressure distillate to serve the purpose, a special intermediate naphtha cut is used.

The volume of trim oil admitted is regulated by automatic temperature controls. The cracked vapors mingle with the straight run vapors in this system, of course, to make one gasoline which is regulated to meet either U. S. Motor specifications or the specifications for the company's multipower as desired. The gasoline as it comes from the top of the bubble fractionator is a finished product except for a wash with sodium hypochlorite.

The heavy ends from the fractionator continuously reflux into Still 1 from the top of which a naphtha stream is taken off. The bottoms



Bubble fractionator at Transcontinental refinery

gravitate from Still 1 into Still 2 according to regular practice. Kerosene streams are taken off from Stills 2 and 3 and the bottoms pumped out as gas oil, most of which goes for charging stock to the cracking plant.

The gasoline is given a sweetening treatment with hypochlorite in a continuous treating system consisting of four vertical tanks. In the first tank of the treating system the gasoline is given a light caustic wash. The second and third tanks give the hypo treat and in the fourth the gasoline is washed with water.

The kerosene is treated with sulfuric acid in two batch agitators and is then filtered through fuller's earth.

The cracking plant consists of nine shell stills and has charging capacity of 1500 barrels a day.

The first large industrial enterprise to be established in the Sudan, Egypt, is the Shell Co., which recently installed storage tanks, a tin factory and case-making plant at Port Sudan. Tank steamers will deliver petroleum products to this plant, which will distribute gasoline and kerosene to the Red Sea markets and into parts of the Belgian Congo and Ethiopia.

The Sarnia district in Ontario, in which the Petrolia, Oil Springs and Oil City fields are, produced 134,065 barrels of crude in 1928, which is 5541 barrels less than 1927 production. Half of the 1928 output came from the Petrolia field.

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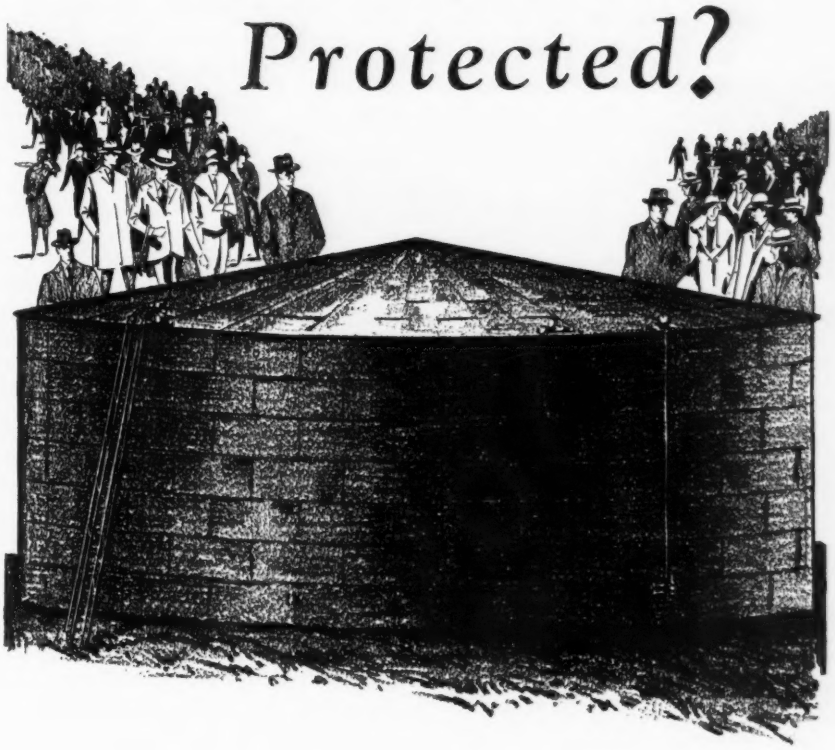

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Tight Crude Market Forces Premiums On Oklahoma-Kansas Refiners

By Allen S. James
N. P. N. STAFF WRITER

THE crude market in Oklahoma and Kansas at the present time is tight. Considerable premium paying has been going on for some time both for the green and the black crudes. Oklahoma and Kansas refiners with little or no production of their own have experienced difficulty obtaining sufficient crude for their contemplated increased operations during the spring and summer—unless they were willing to pay premiums.

No one, of course, admits his company is paying premiums. A few talks with refinery executives, though, who invariably preface their remarks with a ". . . but don't quote me," would convince anyone that premiums were paid before the crude advance on May 20, and are, if anything, more freely offered the producers now than they were prior to the advance.

The executive of one refining company said he had been paying on a certain contract 7.5 cents a barrel premium for crude from a certain lease. The contract will expire soon, and he said he was going to lose the crude because a competitor already has offered the producer 15 cents a barrel premium.

This executive said he would not bother with small amounts, but that he believed his company would sanction his paying up to 10 cents a barrel premium for 100 barrels or more per lease.

Another executive one day the past week visited the offices of a producing and pipe line company from which his company obtains a small amount of crude. He wanted to arrange for a larger amount. To his surprise he was informed the producers were just contemplating cutting him off on the 600 barrels a day he was receiving. He said he was glad to get out of the offices with the assurance he would continue to get even 600 barrels a day.

The pipe line department of a refinery in the Mid-Continent tied into a discovery well recently within a few hours after the well started flowing. Almost before the connections could be made, an executive of the company declared, representatives of seven other crude oil buyers were on the site. "Those fellows stuck around several hours just on the slim chance our engines would break down on us and give them a chance to try for the connection."

The representative of a company outside the Mid-Continent was reported to have been in Tulsa last week attempting to contract for 4000 barrels a day of Mid-Continent crude to be moved out in tank cars. Reports were he did not get it.

All of instances listed above have taken place since the crude advance of May 20. Prior to that time W. S. Fitzpatrick, chairman of the board of the Prairie Oil & Gas Co. had stated his company needed more crude, and was losing connections because of premium paying.* Reports indicate Prairie continues to lose connections because of premium paying, despite the advance. The tightening of the market as far as the Oklahoma and Kansas refiners are concerned has been caused by an increased demand for crudes from refining districts outside the Mid-Continent,** coupled with their own increased demand just at a time when crude production in the state has little immediate prospect of showing a sizable increase.

Two days after Mr. Fitzpatrick made his statement, to which reference already has been made, Seminole production was 378,442 barrels daily. On June 6 the production was 375,373 barrels despite an increase of 27 wells. A small increase in production has been registered recently in Kansas.

THERE are currently only two fields in Oklahoma which could materially increase the crude production in the state. One is the Asher pool, which is still doubtful, and the other is the Oklahoma City field which is still an unknown quantity.

Mid-Continent refiners meanwhile need more crude because they have been putting more crude through their stills. The latest Bureau of Mines figures available are for April 1929. The figures show that the daily average crude runs at Oklahoma, Kansas, inland Texas, inland Louisiana and Arkansas plants were 556,933 barrels. The daily average for April, 1928, in the same districts totaled 472,900 barrels. The increase in April 1929 over April a year ago was 84,033 barrels daily average.

Stocks of crude oil held at refineries at the end of April, 1929 in the districts listed above totaled 9,432,000 barrels as compared with 8,161,000 barrels at the end of April, 1928. The increase for April of this year, therefore, was 1,271,000 barrels. With the increased operations, however, the picture is really about on a par with a year ago. The stocks April 30, 1928, at the current rate of daily crude charges equaled 17.2 days supply, while the stocks April 30 this year equaled 16.9 days supply.

AS a result of the increased demand in refining districts outside the Mid-Continent many Oklahoma refiners have been forced either to sit back and see the crude they would like to have go via pipe line to other refining districts, or to get out and offer the producers premiums to get the crude. It must be kept in mind that the Prairie Pipe Line Co. makes no deliveries of crude in Oklahoma. The first delivery on its line to the north and east is at the Standard Oil Co. of Kansas plant at Neodesha. The Prairie Oil & Gas Co. sells a limited quantity of crude to Oklahoma refiners but the crude is delivered through the refining company's pipe line or the lines of some other company.

The Prairie Oil & Gas Co. has built up their business to the north and east through the Prairie Pipe Line Co. and now the business has reached such proportions that the Prairie Oil & Gas Co. needs more crude to supply the demand and has been forced for some time to draw on storage.

It all gets back to the same starting point. Prairie wants more crude to move to refining districts outside the Mid-Continent. Oklahoma and Kansas refiners want more of the crude which is produced in their states. To get it, though, they must entice the independent producers away from the Prairie and other buyers by offers of premiums.

The Prairie does not pay premiums. Its only recourse is an advance in price. And an advance in price unless it is so stiff the refiners in the Mid-Continent cannot afford to pay premiums and show a profit, means only more premium paying.

*NATIONAL PETROLEUM NEWS, May 15, 1929, Page 28.

**NATIONAL PETROLEUM NEWS, May 29, 1929, Page 72.

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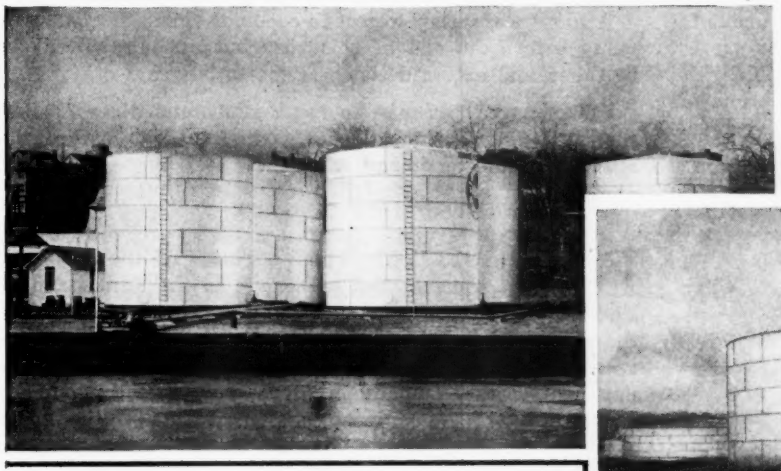
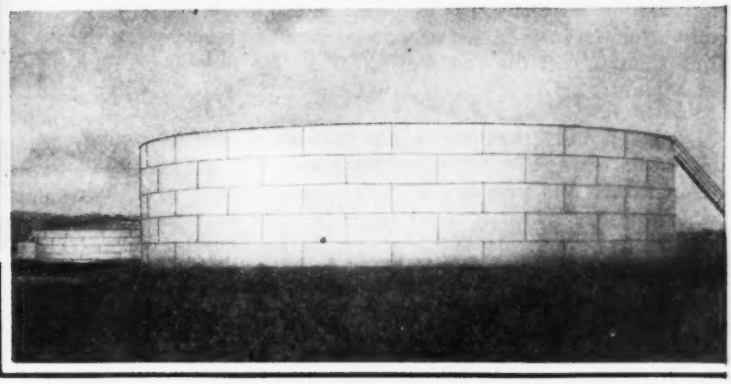


Fuel oil is stored and protected in these attractive tanks belonging to the Holmes Fuel Oil Company of Passaic, N. J.



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Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

IT SEEMS likely that fire insurance companies carrying refinery risks are on the way to kill the goose that lays golden eggs.

They apparently are ignoring altogether the great improvements that are daily being made in refinery construction, operation and housekeeping. If they do not soon take cognizance of these improved conditions that prevail in the refining business it would seem they are likely to lose business.

As L. D. Palmer, safety engineer of the Wood River refinery of the Standard Oil Co. of Indiana stated recently, a refinery fire used to be regarded as "just one of those things." Now it is regarded as the result of somebody's carelessness or some flaw in equipment. A remedy is speedily sought and generally found.

From a construction standpoint, refiners are doing their utmost, aided by the equipment manufacturers, to safeguard their plants against fires. They are putting tight roofs and proper vents on their tanks, they are putting flame arresters in lines through which flames might flash back into tanks or stills. They are fire-proofing steel work that supports tanks and distilling equipment, they are putting in more effective safeguards in the way of fire fighting equipment.

Above all, they are appointing fire marshals and giving them authority in the correction of bad practices about the refinery. They are exercising eternal vigilance to prevent the occurrence of conditions that make fire possible. But so far as I can find out, no insurance company has acknowledged these improved conditions by allowing reductions in premiums on the well cared for plants. I am told that members of one insurance association which carries millions on oil risks will allow no more reduction in premium for the installation of a flame arrester in a dangerous line than it will for the posting of a "No Smoking" sign in a plant.

Refinery fires that cause heavy damage are becoming more and more rare. This notwithstanding the increase of temperature and pressure at which equipment is operated, which naturally would tend to make fires more frequent and more severe. It is likely not to be long before refinery fires are almost entirely a thing of the past.

Unless important reductions in premiums are made, thus recognizing and rewarding the steady progress toward safety, it is likely or it is at least possible that the fire insurance companies may find much of their business gone. I have heard of cases recently where an oil company, having built a new tank or modernized an old one and fitted it with all the new safeguards, have excluded that tank and its contents from its insurance, preferring to take the very remote chance of damage by fire rather than pay the same premium, or practically the same, as would be charged for a fire trap tank with a wooden roof and open hatches.

REFINERY remodelling and improving goes steadily on in many directions. The Lamont, Ill., refinery recently taken over by the Globe Oil & Refining Co. of Blackwell, Okla., is changing its hookup under the direction of Winkler-Koch Engineering Co. of Wichita, Kan., and is expected to be running shortly on Muskegon crude.

Reports are the Lincoln Oil Refining Co. (Ohio Oil Co.) has been making some changes in a pipe still at its Robinson, Ill., refinery. Shaffer Oil & Refining Co. is putting in a number of fractionating towers at its Cushing, Okla., refinery.

Wilcox Oil Gas Co. plant at Bristow is reported about ready to start up.

Producers & Refiners Corp. is building a Winkler-Koch topping still at its West Tulsa refinery. It is expected to have a crude capacity of 6000 barrels a day.

* * *

HEARING of the suit brought in 1916 by the Universal Oil Products Co. (Dubbs) against the Standard Oil Co. of Indiana charging that the Burton cracking process infringes Dubbs patents on cracking, is going on again. This time it is in the Chase Hotel in St. Louis before Special Master Holmes Hall. The record now amounts to 21,000 typewritten pages.

Attorneys say they expect to conclude the taking of testimony before the end of this year but appeals will likely be taken and actual decision seems to be years off.

How long will it take to read, study and digest 21,000 pages of manuscript? That is the first job before the court after the testimony is all in.

* * *

DAN E. SULLIVAN, chief engineer of the Pure Oil Co., is the featured personage in the June issue of Pure Oil News. His picture adorns the front cover of the company magazine and inside the paper there is an article by him telling of the growth of the engineering department of the company in 10 years from nothing to an organization of 75 engineers and assistants in the home office, 20 field engineers and more than 1000 workmen.

I first met Dan Sullivan about 10 years ago when the company's refinery at Heath, near Newark, O., was under construction. He was a subordinate engineer then. He states in his article that building of the Heath refinery was the first important construction of the then infant engineering department.

Since then, during his climb to command of the engineering department and since he reached that position he has built more refineries, seaboard terminals, bulk stations and all kinds of refinery equipment, including much construction work in connection with the company's Gyro vapor phase cracking process. He is only 34.

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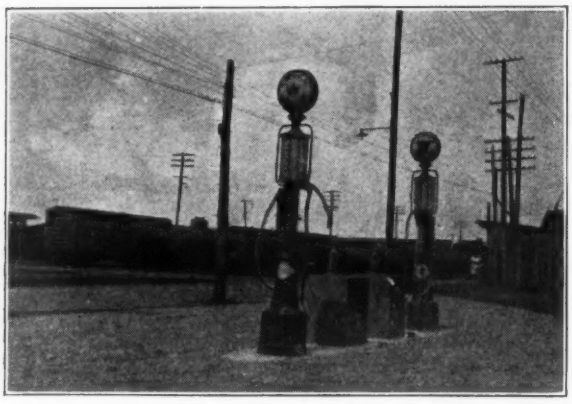
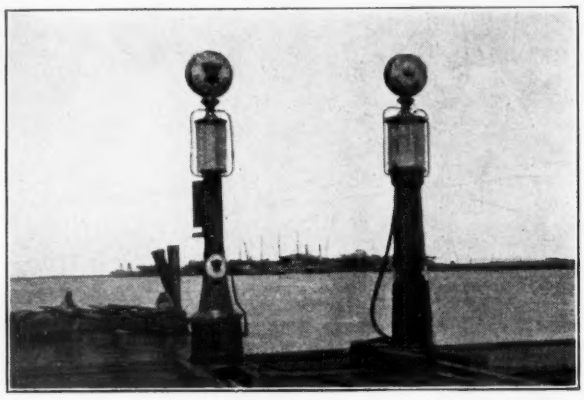
Amphibian Service Station Fronts Both on Highway And Bay





Harbor Oil Co.'s water and land servicing facilities

MOBILE, Ala.

A SERVICE station that is amphibian in character has just been completed in Mobile, Ala. Motorists are accustomed to the ordinary dry-land variety and many owners of gasoline launches and speed boats are used to being served by the seagoing service stations—tanks and vending pumps mounted on a tug, used around New York and Chicago.

Harbor Oil Co. of Mobile is builder of the new "amphibian." The location is a narrow piece of property, possibly 300 feet long. One end of the lot faces Commerce street at the foot of Almira street, and the other end of the lot fronts on Mobile river just before it becomes Mobile Bay. Development and operation is in charge of C. B. Littlegreen, general manager since April 1.

Mr. Littlegreen entered the oil business by operating a service station of his own in Mobile for a few years. There he got acquainted with the trade and learned the technique of the oil business. Early this spring he bought a controlling interest in Harbor Oil Co. from J. H. Burton and H. M. Hemstead, who are still interested in it.

Since then Mr. Littlegreen has built a new dock at the river end of the lot and installed two visible, vending pumps on it. The pumps are equipped with extra long lengths of hose so that the tank of a motor boat may be filled in exactly the same way as an automobile tank is filled, without the tedious old method of bucketing.

At the Commerce street end of the lot he has installed two pumps in the middle of a double, semicircular drive. There is no canopy. Commerce street is a street of heavy traffic and most of the customers are truck operators. Room to get into the lot and out is worth more to such customers than shade or shelter. The service station office is well back from the end of the lot nearest Commerce street.

All four vending pumps for gasoline are exactly alike. At the truck station and at the boat station both, one pump is for competitive gasoline and one for Ethyl gasoline. Tank car storage served by railroad sidetrack, is under ground in the middle of the lot. Mr. Littlegreen is situated to buy Ethyl gasoline, regular gasoline, kerosene and furnace oil in car lots. The same pump which unloads the tank cars to storage is used to move gasoline from storage to the smaller tanks under both sets of vending pumps.

Sales of kerosene and furnace oil are made only at the river end of the lot. A small, rotary pump in a shelter near the dock is used to deliver this class of merchandise to customers' boats. Although furnace oil customers are not as frequent as gasoline customers, when they come they are worth while. It is not unusual for pleasure craft equipped with diesel engines to take on a fill of 500 gallons at once.

Mr. Littlegreen is not the only oil man catering to river trade in Mobile, but he is the only one that has adopted this method. Ordinarily it is done with trucks. Several of the major operators have tank trucks with habitual locations around certain docks on the bay. By this method their customers know about where they can be reached with a boat.

Huxford Oil Co., the town's leading Independent jobber, has one or more tank trucks on the state docks all the time. Arrangements are made to unload at three different points. If a customer's boat pulls up alongside one of these locations where a Huxford truck usually stays and none is there, he may be assured that one will be there presently.

If the boat is exceptionally large, requiring 1000 or 1500 gallons of furnace oil, fueling is done by appointment anyway, two or three days in advance of the boat's sailing date on any particular cruise. It takes two or three tank truck loads to fuel it and the owner usually allows time for such preparation. If any customer is in a hurry however, he can get speed by telephoning the office of the Huxford Oil Co. If he demands it they can send three trucks to the dock in rapid succession.

Fuel for diesel engines has been selling at 8 cents a gallon from tank truck during the past winter, the same price and the same product, as domestic heating oil which is growing in popularity in the south.

Curtailment Efforts Begin to Show In Shrinking of "Days' Supply"

By Roger B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, June 15

THE efforts at curtailment of crude oil production that had been made to the end of April, indicate fair results, the U. S. Bureau of Mines report on operating statistics for April show, although stocks of both crude and refined oils were larger at the end of April than at the end of March.

The improvement is shown in the diminishing number of days' supply the stocks of all oils represented at the end of April when compared with the days' supply represented by stocks at the ends of preceding months this year and with stocks at the end of April, 1928.

Total stocks—both crude and refined oils—at the end of April, 1929, formed 218.9 days' supply at the April rate of demand, a decline of 13.3 days' supply from the supply at the end of March and of 12.3 days' supply from the average demand in the first four months of this year.

This decline in days' supply was in spite of an increase of more than 6,000,000 barrels in physical supply over stocks at the end of March. Above-ground stocks of crude oil increased more than 3,000,000 barrels in April and stocks of refined oils and natural gasoline increased almost 3,000,000 barrels.

The accumulation of stocks of all oils was at the rate of 257,000 barrels a day in April, as compared with 438,000 in March and an average of 415,000 barrels a day in the first four months of this year. In April, 1928, the accumulation was at the rate of 291,000 barrels a day and the average for the first four months of 1928 was 382,000 barrels a day.

The stocks of all oils at the end of April, 1928, represented eight months' supply, or one months' supply more than the stocks at the end of April, 1929, although the latter stocks were approximately 34,000,000 barrels larger than stocks a year ago.

New supply of all oils, including imports, reached the record height of 3,170,000 barrels daily average in April, 42,000 barrels more than the previous record established in February, but total demand—domestic and export—was 2,967,000 barrels daily, the second largest average demand. The record for demand is 3,009,000 barrels daily average which was reached last September. The gap between the April average demand and the September record demand may have been spanned in May, statistics for which are not yet available.

Crude Oil

Crude oil production averaged 2,670,300 barrels in April, 8500 barrels daily average more than the March production, but the April recovery was still 33,000 barrels daily average under the record production of February.

Production of crude the first four months of this year has been more than 30,000,000 barrels or 10.61 per cent larger than production in the corresponding time of 1928 but the total stocks of crude oil increased 22,137,000 barrels in the first four months of this year and only 550,000 barrels in the first four months of last year.

Stocks at the end of April, 1929,

High Lights in April Oil Statistics

Crude production higher than in March but still below peak.

Crude oil stocks at new peak.

Stocks of all oils also at new peak.

Gasoline production largest on record.

Domestic gasoline demand second only to demand last August.

Decline in gasoline stocks largest in any April of which there is record.

High consumption period of gasoline began month earlier than usual.

Kerosene and lubricating oil stocks lowered.

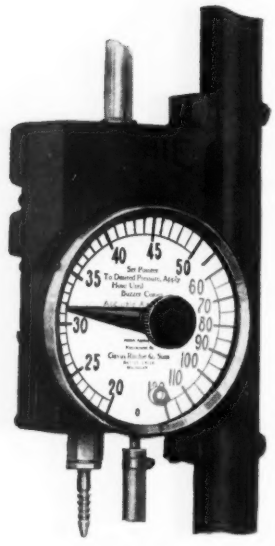
Stocks of paraffin wax and gas and fuel oils soar.

Petroleum Supply and Demand — Barrels

	April 1929	*March 1929	Feb. 1929	Jan. 1929	April 1928	Jan.-April 1929	Jan.-April 1928
Domestic Crude Production: Light	71,799,000	73,713,000	67,743,000	74,812,000	64,796,000	288,067,000	255,882,000
Heavy	8,311,000	8,802,000	7,950,000	7,167,000	7,331,000	32,230,000	31,938,000
Imports of crude oil	7,828,000	6,790,000	7,016,000	8,075,000	5,661,000	29,709,000	24,687,000
Imports of refined oil	2,634,000	1,489,000	908,000	884,000	1,680,000	5,915,000	5,034,000
Natural gasoline produced	4,264,000	4,324,000	3,736,000	3,983,000	3,467,000	16,307,000	13,667,000
Benzol used in blending	255,000	264,000	233,000	250,000	229,000	1,002,000	910,000
Total new supply of all oils	95,091,000	95,382,000	87,586,000	95,171,000	83,164,000	373,230,000	332,118,000
Total stocks end of preceding month	643,530,000	634,063,000	625,199,000	613,483,000	606,974,000	613,483,000	589,607,000
Total supply of all oils	738,621,000	729,445,000	712,785,000	708,654,000	690,138,000	986,713,000	921,725,000
Exports of crude oil	1,726,000	1,572,000	1,678,000	1,972,000	1,303,000	6,948,000	5,308,000
Exports of refined oil	10,357,000	10,801,000	9,506,000	11,714,000	11,813,000	42,378,000	44,372,000
Domestic demand, crude and refined	76,921,000	73,542,000	67,538,000	69,769,000	67,085,000	287,770,000	256,154,000
Total demand	89,004,000	85,915,000	78,722,000	83,455,000	80,201,000	337,096,000	305,834,000
Total stocks of all oils end of month	649,617,000	643,530,000	634,063,000	625,199,000	615,891,000	649,617,000	615,891,000
Days' supply	218.9	232.2	224.5	232.2	230.4	231.2	243.6
Increase in stocks of all oils	6,087,000	9,467,000	8,864,000	10,660,000	2,963,000	36,134,000	26,284,000
Daily average new supply	3,170,000	3,077,000	3,128,000	3,070,000	2,772,000	3,110,000	2,745,000
Daily average demand	2,967,000	2,771,000	2,812,000	2,692,000	2,673,000	2,809,000	2,528,000
Daily average excess of supply	257,000	438,000	316,000	378,000	291,000	415,000	382,000
Crude stocks east of Calif.: Light	331,301,000	327,634,000	325,766,000	322,749,000	319,591,000	331,301,000	319,591,000
Heavy	49,405,000	52,025,000	51,173,000	50,164,000	52,307,000	49,405,000	52,307,000
In California: Light	26,500,000	24,067,000	21,810,000	19,196,000	18,752,000	26,500,000	18,752,000
Heavy	100,332,000	100,504,000	99,284,000	98,682,000	94,301,000	100,332,000	94,301,000
Total stocks of crude	507,538,000	504,230,000	498,033,000	490,791,000	484,951,000	507,538,000	484,951,000
Total stocks of refined	140,913,000	138,305,000	135,209,000	133,667,000	130,109,000	140,913,000	130,109,000
Total stocks of natural gasoline	1,166,000	995,000	821,000	741,000	831,000	1,166,000	831,000

*Revised

ELECTRIC AIR RITCHIE REGULATOR



MODEL R

This model can be attached to any pipe or wall. With it, any plain ordinary air line or air tower can be quickly converted into a modern Ritchie. Installation is simple and can be made by any handy man.

MODEL RS

This Ritchie model consists of Model R mounted on an attractive standard of just the right height for maximum convenience. The standard is a separate unit and may be purchased separately where it is desired to convert Model R into Model RS.

Speedy √
Trouble-proof √
Dependable √
Accurate √

. . . In other words, an efficient Air Pressure Gauge . . . *at last!*

Many types of air pressure gauges have been designed, only to be discarded for one reason or another. Some were too slow. Others were too complicated. Still others were designed with pulsating diaphragms which frequently caused inaccuracy.

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This tried and proved principle of operation is an exclusive feature of the Ritchie Electric Air Regulator. That's why no other air pressure gauge can be so dependable, so accurate, or so fast in action as the Ritchie.

Speedy—The Ritchie is automatic and *instantaneous* in action —a feature obtainable only with Bourdon Tube control.

Trouble-proof—Absolutely nothing to get out of order: no springs, no weights, no stuffing boxes, no diaphragms. Furthermore, there are only four moving parts and the movement at the bearing points is so slight ($\frac{1}{64}$ inch) as to be negligible.

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Accurate—Guaranteed not to vary more than two pounds from *absolute accuracy at every pressure.*

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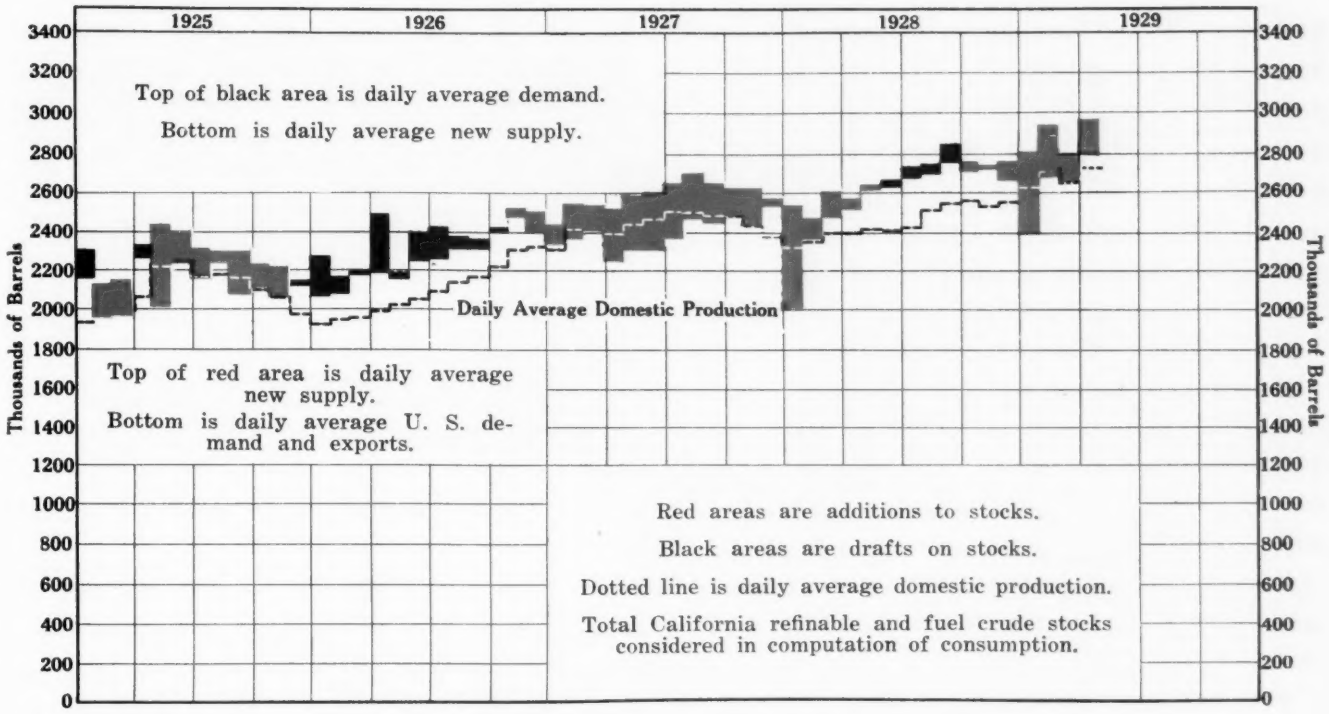
Crude Oil Production and Consumption



April domestic production	2,670,300 Bbls. daily av.
April imports	260,900 Bbls. daily av.
Total new supply	2,931,200 Bbls. daily av.
April indicated demand east of California	2,062,400 Bbls. daily av.
April indicated demand in California	701,100 Bbls. daily av.
April exports	57,500 Bbls. daily av.
Total indicated demand	2,821,000 Bbls. daily av.
Stocks at refineries east of California, April 30, 1929	47,730,000 Bbls.
Stocks in pipe lines and at tank farms east of California	332,691,000 Bbls.
Stocks of light California crude	26,500,000 Bbls.
Stocks of heavy California crude	100,332,000 Bbls.
Stocks of foreign crude not at refineries	285,000 Bbls.
*Total stocks of crude	507,538,000 Bbls.
Increase in stocks in April	3,308,000 Bbls.
Stocks April 30, 1928	484,951,000 Bbls.

*Exclusive of stocks held by producers which amounted to about 9,270,000 bbls.

were 22,587,000 barrels or 4.65 per cent larger than stocks at the end of April, 1928. Accumulation of crude oil stocks the last year was mostly in the first four months of 1929.

This fact may be taken as a warning that continued accumulation may turn the above-ground supply of crude oil from a diminishing quantity in terms of days' supply to a dangerous and increasingly burdensome reserve.

Crude Stocks as Month Ends

(Thousands of Barrels)

1928	East of California	†In Calif.	Total U. S.
January	359,260	114,820	474,080
February	363,807	114,907	478,714
March	369,249	114,117	483,366
April	371,898	113,053	484,951
May	371,969	113,111	485,080
June	371,212	113,431	484,643
July	369,389	114,878	484,267
August	368,816	113,367	482,183
September	366,750	113,433	480,183
October	368,007	113,767	481,774
November	367,619	115,053	482,672
December	368,431	116,970	485,401
1929			
January	372,913	118,934	491,847
February	376,939	121,094	498,033

†Includes heavy fuels.

Production in only the Rocky Mountain region of the various major geographical divisions of the United States that produce oil, showed a decline this year from last year's recovery. Production in California has been 25.30 per cent larger this year than last; on the Gulf Coast 20.16 per cent larger, in the Mid-Continent 5.31 per cent larger, and in the fields east of the Mississippi 4.67 per cent larger.

In the Rocky Mountain states only New Mexico produced more crude this year than last. In the Mid-Continent only Oklahoma and Texas showed a gain. Among the eastern states Pennsylvania, New York and Michigan contributed to the increase.

The outstanding gains in production in April over March production were in Gulf Coastal Texas, where the increase was 10,400 barrels daily average, and in Kansas where the increase was 13,100 barrels daily average. Oklahoma's average production was up 4500 barrels daily average, but inland Texas production was down 11,600 barrels daily average and California's was down 8200 barrels daily average.

Imports of crude oil averaged 260,900 barrels daily in April as com-

Crude Oil Imports—Barrels

Origin	April Daily Av.	March Daily Av.	Jan.-Apr. 1929 Total	Jan.-Apr. 1928 Total
Mexico	37,100	18,900	3,012,000	4,919,000
Venezuela	173,400	158,800	20,537,000	14,139,000
Colombia	44,300	28,600	4,868,000	4,629,000
Other countries	6,100	12,700	1,292,000	1,000,000
Total	260,900	219,000	29,709,000	24,687,000

Crude Oil Exports—Barrels

Destination	April Daily Av.	March Daily Av.	Jan.-April 1929 Total	Jan.-April 1928 Total
Canada	42,600	40,300	5,389,000	4,092,000
Other countries	14,900	10,400	1,557,000	1,209,000
Total	57,500	50,700	6,946,000	5,301,000

Crude Oil Production by States and Fields—Barrels

	April 1929 Daily Avg.	March 1929 Daily Avg.	April 1928 Daily Avg.	Jan.-Apr. 1929 Total	Jan.-Apr. 1928 Total	1929 Change Over 1928
California	776,500	784,700	609,400	93,307,000	74,465,000	+25.30
Gulf Coast Louisiana	19,300	18,800	14,000	2,426,000	1,706,000	+42.20
Gulf Coast Texas	131,900	121,500	104,900	14,552,000	12,423,000	+17.14
Total Gulf Coast	151,200	140,300	118,900	16,978,000	14,129,000	+20.16
Total Coastal	927,700	925,000	728,300	110,285,000	88,694,000	+24.34
Colorado	6,200	6,600	7,300	791,000	926,000	—14.58
Montana	8,700	9,100	10,700	1,123,000	1,397,000	—19.61
New Mexico	2,600	2,900	2,400	312,000	294,000	+6.12
Wyoming	50,800	50,400	56,600	6,054,000	6,805,000	—11.04
Total Rocky Mountain	68,300	69,000	77,000	8,280,000	9,422,000	—12.33
Arkansas	74,400	75,500	80,100	9,043,000	10,385,000	—12.92
Kansas	112,700	99,600	114,000	12,230,000	13,568,000	—9.86
Oklahoma	686,200	681,700	624,400	84,673,000	78,820,000	+7.42
North Louisiana	34,800	34,900	45,000	2,426,000	5,334,000	—54.52
Inland Texas	648,800	660,400	627,800	77,970,000	68,645,000	+13.58
Total Southwestern	1,556,900	1,552,100	1,491,300	186,342,000	176,952,000	+5.31
Illinois	15,200	19,400	15,600	2,017,000	2,131,000	—5.35
Indiana	2,700	2,700	2,800	336,000	320,000	+5.00
Ohio	18,700	17,600	19,500	2,121,000	2,324,000	—8.73
Kentucky	19,500	18,000	20,600	2,239,000	2,341,000	—4.36
Pennsylvania	31,300	29,600	26,200	3,511,000	3,152,000	+11.39
West Virginia	15,500	15,100	15,200	1,799,000	1,881,000	—4.36
New York	9,200	8,600	6,500	1,039,000	761,000	+36.53
Michigan	5,200	4,700	1,200	592,000	127,000	+366.14
Tennessee	100	.....	100	8,000	15,000	—46.67
Total Eastern	117,400	115,700	107,700	13,662,000	13,052,000	+4.67
GRAND TOTAL U. S.	2,670,300	2,661,800	2,404,300	318,569,000	288,020,000	+10.61

pared with 219,000 barrels daily in March. Imports the first four months of 1929 were 29,709,000 barrels, an increase of 5,022,000 barrels or 20.34 per cent over imports the first four months of 1928. The gain this year is wholly attributable to increased receipts from Venezuela.

Daily average production in the leading pools in April and March compared:

	April Bbls.	March Bbls.
Seminole	396,000	398,000
West Texas	365,000	385,000
Long Beach	190,000	188,000
Santa Fe Springs	158,000	170,000

Exports of crude oil average 57,500 barrels daily in April, a gain of 6800 barrels over the March average. Exports the first four months totaled 6,946,000 barrels, a gain of 1,645,000 barrels over the exports in the corresponding time a year before.

Refiners east of California continued to add crude oil to their stocks, the Bureau of Mines report showing an increase of almost 1,500,000 barrels in April. Pipe line and tank farm stocks east of California were lowered by 419,000 barrels.

Stocks of refinable crude oil in California rose 2,433,000 barrels in April and stocks of heavy grades were lowered 172,000 barrels.

Runs to Stills

Runs to stills of all oils averaged 2,953,796 barrels in April, a record volume. Crude runs were increased 78,484 barrels daily average or 3.01 per cent over March crude input. There was a small decline—0.42 per cent—in the use of natural gasoline.

Stocks of Crude Oil

(Domestic Unless Otherwise Specified. Amounts in Thousands of Barrels)

AT REFINERIES

(Reported by Location of Storage)

	April 1929	March 1929	April 1928
East Coast:			
Domestic	9,442	9,050	7,979
Foreign	6,313	6,380	5,866
Appalachian	2,493	2,496	2,166
Indiana, Illinois, etc.	2,932	2,930	3,148
Oklahoma, Kansas, etc.	6,059	5,920	5,889
Texas Inland	2,150	1,952	1,558
Texas Gulf Coast:			
Domestic	9,016	8,417	8,132
Foreign	598	392	243
Ark. and Inland La.	1,223	1,310	684
Louisiana Gulf Coast:			
Domestic	3,311	2,986	5,343
Foreign	2,070	2,316	1,053
Rocky Mountain	2,123	2,108	1,541
U. S. east of Calif	47,730	46,257	43,602

AT TANK FARMS, IN PIPE LINES AND ELSEWHERE THAN REFINERIES

(Reported by Field of Origin)

	April 1929	March 1929	April 1928
Appalachian	4,745	4,695	5,955
Kentucky	874	798	1,208
Lima-Indiana	979	994	1,196
Ill., S. W. Indiana	11,150	11,343	12,217
Okla., Kans., Tex., except coastal	245,478	246,035	237,477
N. La.-Ark	24,867	25,212	26,201
Gulf Coast	19,966	19,091	16,630
Rocky Mountain	24,632	24,942	27,293
East of Calif., pipe line and tank farm stocks	332,691	333,110	328,177
Foreign Crude:			
Atlantic ports	94	59	65
Gulf ports	191	233	54
Total refinery, pipe line and tank farm stocks east of Calif.	380,706	379,659	371,898
California:			
20° and lighter	26,500	24,067	18,752
Heavier than 20°	100,332	100,504	93,301
GRAND TOTAL	507,538	504,230	483,951

CLASSIFICATION BY GRAVITY

(East of California)

24° and lighter	331,301	329,634	319,591
Heavier than 24°	49,405	50,025	52,307

PRODUCERS' STOCKS

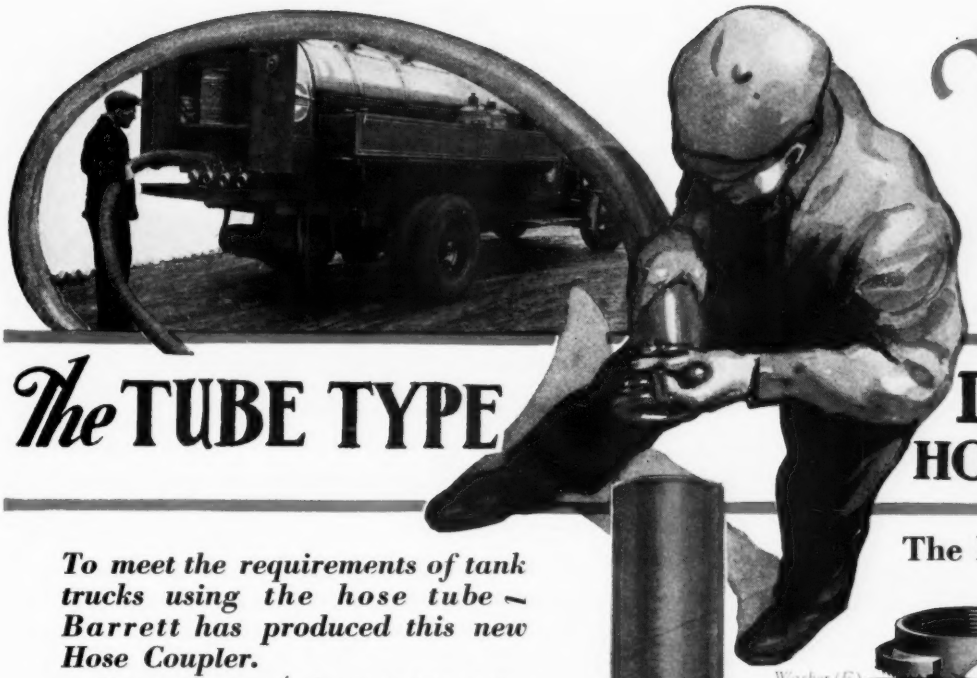
(Approximate)

East of Calif.	7,200	7,550	.....
California	2,070	1,851	.....

Charges of unfinished oils, probably including some of the runs to pressure stills, were increased approxi-

Runs to Stills—Barrels—Daily Average

Districts	CRUDE OIL April 1929	CRUDE OIL March 1929	UNFINISHED OIL April 1929	UNFINISHED OIL March 1929	NATURAL GASOLINE April 1929	NATURAL GASOLINE March 1929	TOTAL Daily Average April 1929	INPUT Daily Average March 1929
Texas Gulf Coast: Domestic	400,300	410,484	16,667	4,290	21,333	23,581	438,300	438,355
Foreign	13,433	3,806	.....	.....	.....	.....	13,433	3,806
Louisiana Gulf Coast: Domestic	118,566	122,613	3,033	226	15,333	17,806	136,932	140,645
Foreign	27,766	27,935	.....	.....	.....	.....	27,766	27,935
Total Gulf Coast	560,065	564,838	19,700	4,516	36,666	41,387	616,431	610,741
East Coast: Domestic	278,466	267,193	42,300	26,871	9,600	5,710	330,366	299,774
Foreign	180,800	181,613	.....	.....	.....	.....	180,800	181,613
Total East Coast	459,266	448,806	42,300	26,871	9,600	5,710	511,166	481,387
California	644,633	633,193	18,633	11,516	45,267	45,613	708,533	690,322
Total Tide Water	1,663,964	1,646,837	80,633	42,903	91,533	92,710	1,836,130	1,782,450
Appalachian	97,267	89,258	4,133	3,226	1,167	1,613	102,567	94,097
Ind., Ill., Ky	291,100	274,322	19,533	21,710	5,433	5,193	316,066	301,225
Total East Central	388,367	363,580	23,666	24,936	6,600	6,806	418,633	395,322
Oklahoma, Kans., Mo	317,967	299,935	12,067	14,839	9,667	9,065	339,701	323,839
Inland Texas	167,467	151,000	12,333	2,677	4,533	4,097	184,333	157,774
No. La. and Ark	71,500	72,032	433	355	3,500	3,742	75,433	76,129
Total Southwestern	556,934	522,967	24,833	17,871	17,700	16,904	599,467	557,742
Rocky Mountain	72,700	70,097	22,633	20,161	4,233	41,161	99,566	94,419
Total Inland	1,018,000	956,644	71,132	62,968	28,533	27,871	1,117,665	1,047,483
TOTAL UNITED STATES	2,681,965	2,603,481	151,765	105,871	120,066	120,581	2,953,796	2,829,933
Change April over March	+0.30%	.....	+43.34%	.....	—0.42%	.....	+4.37%	.....
Runs, April 1928	2,422,300	.....	102,700	.....	94,500	.....	2,629,800	.....
Change Runs April, 1929, over April, 1928	+10.71%	.....	+47.06%	.....	+27.00%	.....	+12.32%	.....



New!

The TUBE TYPE LEVERLOCK HOSE COUPLER

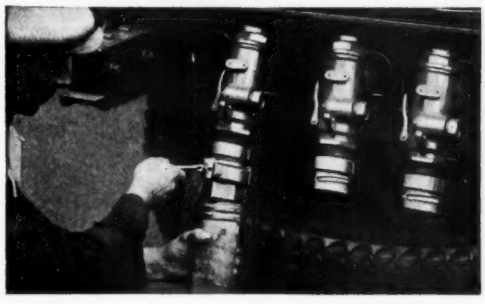
To meet the requirements of tank trucks using the hose tube ~ Barrett has produced this new Hose Coupler.

Here is the famous Lever Locking principle so designed that it easily slides into the tube. Moreover, the same quick, easy, safe Barrett coupling action is retained that is such a desirable characteristic of all Barrett Lever Locked Hose Couplers!

Cast in Red Brass, every part of this new Barrett Coupler fits with definite precision, ***always!*** A simple twist when attaching locks a leak-proof coupling. A reverse twist, just as simple, instantly disengages the hose.

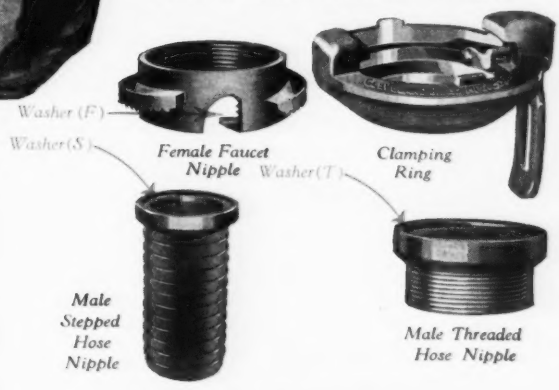
Think of the time saved over the usual wrench couplings.

Illustration below shows coupling about to be made.



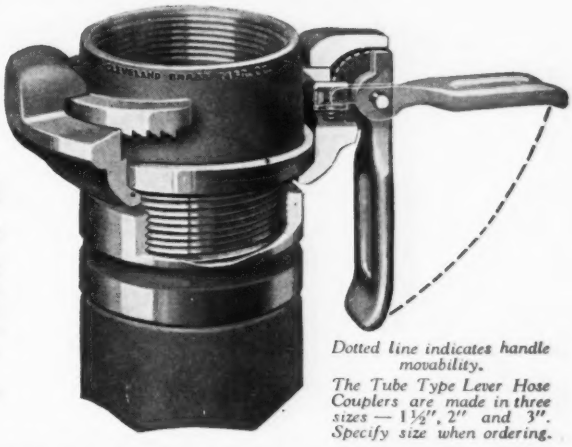
The tube above represents the hose tube on truck tank.

The Disassembled Parts



How It Operates

The handle of the Clamping Ring is raised to depress the ratchet spring that engages the faucet nipple teeth. Lowering the lever handle automatically locks the coupler in place. When inserted in the truck tube, this lever handle folds back permitting easy insertion or withdrawal of the hose.



Dotted line indicates handle movability.

The Tube Type Lever Hose Couplers are made in three sizes — 1½", 2" and 3". Specify size when ordering.

Change Over to BARRETT Lever Locked Hose Couplers ~ *And Save Time, Money and Material*

Barrett Hose Couplers, both tube and regular type being strong, sturdy and easily withstanding blows and knocks, are extensively used. They are standard equipment with many oil companies. Any tank truck operator who has once used the Barrett Type Hose Couplers is all for them. What better endorsement than a record of successful usefulness?

For further information, ask our representatives or write us direct.

THE CLEVELAND BRASS MANUFACTURING COMPANY, 4640 HAMILTON AVENUE, CLEVELAND, OHIO

BARRETT

Natural Gasoline and Motor Blends — Barrels

Districts	Daily Avg. Production April (Net)	Daily Avg. Production Mar. (Net)	Stocks End of April	Stocks End of March	Motor Fuel Blends Made In April	Motor Fuel Blends Made in March	Stocks Blends End of April	Stocks Blends End of March	Districts
Appalachian	6,508	7,143	74,214	66,167	4,357	4,714	5,857	6,000	Appalachian
Ill., Ky., etc.	952	922	7,167	7,738	48	48	262	262	Ill., Ky., etc.
Seminole, etc.	23,095	21,198	97,167	67,238	18,119	12,024	2,738	905	Seminole, etc.
Osage County	5,794	5,991	274,952	223,738	214	167	71	48	Osage County
Rest of State	16,349	16,589	208,690	187,690	71,167	49,095	8,119	7,071	Rest of State
Total Oklahoma	45,238	43,778	580,809	478,667	89,500	61,285	10,928	8,024	Total Oklahoma
Kansas	2,381	2,227	31,905	25,857	857	881	214	143	Kansas
Panhandle	10,556	10,215	214,595	200,167	13,929	10,238	1,976	381	Panhandle
North Texas	3,333	3,533	33,071	28,286	3,381	3,286	929	929	North Texas
West Central	10,000	9,831	142,523	102,190	5,928	5,000	2,190	1,762	West Central
Rest of State	2,619	2,458	11,309	7,952	1,286	1,357	262	262	Rest of State
Total Texas	26,508	26,037	401,498	338,595	24,524	19,881	5,357	3,334	Total Texas
Louisiana	3,109	3,917	22,429	22,095	500	428	238	190	Louisiana
Arkansas	2,143	2,073	7,285	8,833	15,334	18,405	952	667	Arkansas
Rocky Mountain	3,174	2,842	11,785	14,095	.....	.....	.....	.....	Rocky Mountain
Long Beach	16,190	16,052	.....	.....	.....	.....	.....	.....	Long Beach
Ventura Ave.	4,921	4,839	.....	.....	.....	.....	.....	.....	Ventura Ave.
Seal Beach	3,016	2,611	.....	.....	.....	.....	.....	.....	Seal Beach
Huntington Beach	2,698	2,304	.....	.....	.....	.....	.....	.....	Huntington Beach
Santa Fe Springs	12,302	12,596	.....	.....	.....	.....	.....	.....	Santa Fe Springs
Rest of California	12,381	12,135	.....	.....	.....	.....	.....	.....	Rest of California
Total California	51,508	50,537	29,000	33,238	.....	.....	.....	.....	Total Californi.
Total U. S.	141,521	139,476	1,137,092	995,285	135,120	105,643	23,594	18,906	Total U. S.

mately 46,000 barrels daily average or 43.34 per cent.

Charges of all oils were increased in every major refining region. The only district to report smaller runs in April than in March was the North Louisiana-Arkansas district.

Gasoline

Although the input of oils to stills was increased 4.37 per cent in April, the output of gasoline was increased only 3.84 per cent.

Production of gasoline at refineries averaged 1,154,533 barrels a day, a new record output. Shipments, however, averaged 1,227,466 barrels daily. There was a doubling of imports but exports were little changed. Demand was sufficient to cause a draft of 1,190,000 barrels on gasoline stocks, as compared with an addition to stocks in April, 1928.

The 1,190,000-barrel draft was the largest draft in any April since the Bureau of Mines began to compile operating statistics.

Domestic demand for gasoline exceeded a million barrels daily average in April, and was the second highest demand on record. The record, 1,075,000 barrels a day, was attained last August.

Domestic demand this year to April 30 was 13.96 per cent larger than domestic demand in the first four months of 1928. Export demand has been 18.01 per cent larger, but ex-

Gasoline Supply and Demand — Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1928	27,981,000	562,000	3,713,000	20,778,000	37,368,000
February	26,856,000	372,000	3,341,000	21,402,000	39,853,000
March	29,276,000	259,000	4,016,000	24,294,000	41,078,000
April	29,317,000	472,000	4,111,000	25,567,000	41,189,000
Total Four Months	113,430,000	1,665,000	15,181,000	92,041,000	41,189,000
May	30,825,000	368,000	5,812,000	28,346,000	38,224,000
June	30,703,000	212,000	4,808,000	29,469,000	34,862,000
July	32,974,000	267,000	5,167,000	32,542,000	30,394,000
August	34,101,000	479,000	4,563,000	33,336,000	27,075,000
September	33,669,000	193,000	4,837,000	29,722,000	26,378,000
October	34,403,000	388,000	4,049,000	30,680,000	26,440,000
November	33,171,000	304,000	4,678,000	26,052,000	29,185,000
December	33,907,000	420,000	3,802,000	26,644,000	33,066,000
1928 Total	377,183,000	4,296,000	52,897,000	328,832,000	33,066,000
January, 1929	34,335,000	499,000	4,650,000	22,602,000	40,648,000
February	31,264,000	406,000	3,838,000	22,776,000	45,704,000
March	34,467,000	327,000	4,798,000	*27,495,000	*48,205,000
April	34,636,000	822,000	4,629,000	32,019,000	47,015,000
Total Four Months	134,702,000	2,054,000	17,915,000	104,892,000	47,015,000
Change This Year Over Like Period Last Year	+21,272,000	+389,000	+2,734,000	+12,851,000	+5,826,000
Per Cent	+18.75	+23.36	+18.01	+13.96	+14.14

*Revised

Gasoline Situation by Districts — Barrels

Districts	April 1929 Daily Avg. Output	March 1929 Daily Avg. Output	April Change %	April Daily Avg. Shipments	March Daily Avg. Shipments	April Change %	Stocks April 1929	Stocks March 1929	Stocks April 1928	Districts
Gulf Coast Texas	186,900	181,419	+ 3.02	200,466	172,677	+16.09	5,915,000	6,322,000	5,113,000	Gulf Coast Texas
Gulf Coast Louis.	63,100	63,290	— 0.30	80,700	60,484	+33.42	2,318,000	2,848,000	1,583,000	Gulf Coast Louis.
Total Gulf	250,000	244,709	+ 2.16	281,166	233,161	+20.59	8,233,000	9,170,000	6,696,000	Total Gulf
East Coast	150,167	140,355	+ 6.99	150,700	*129,645	+16.24	7,525,000	*7,541,000	6,841,000	East Coast
California	243,733	239,226	+ 1.88	219,400	203,516	+ 7.80	12,023,000	11,293,000	12,577,000	California
Total Coastal	643,900	624,290	+ 3.14	651,266	*566,322	+15.00	27,781,000	*28,004,000	26,114,000	Total Coastal
Appalachian	44,867	43,065	+ 4.18	50,100	38,645	+29.64	1,850,000	2,007,000	1,290,000	Appalachian
Ind., Ill., Ky., etc.	169,667	159,774	+ 6.19	188,100	150,387	+25.08	7,862,000	8,415,000	5,507,000	Ind., Ill., Ky., etc.
Total East Cent.	214,534	202,839	+ 5.77	238,200	189,032	+26.01	9,712,000	10,422,000	6,797,000	Total East Cent.
Okla., Kans., Mo.	166,033	162,129	+ 2.40	173,600	158,710	+ 9.38	5,622,000	5,849,000	4,198,000	Okla., Kans., Mo.
Inland Texas	61,700	55,387	+11.40	93,967	54,548	+72.26	1,018,000	986,000	795,000	Inland Texas
No. La. and Ark.	20,500	21,258	— 3.57	20,967	22,193	— 5.52	257,000	271,000	107,000	No. La. and Ark.
Total Southwest.	248,233	238,774	+ 3.96	288,534	235,451	+22.54	6,897,000	7,106,000	5,100,000	Total Southwest.
Rocky Mountain	47,866	45,935	+ 4.20	49,466	40,356	+22.57	2,625,000	2,673,000	2,199,000	Rocky Mountain
Total Inland	510,633	487,548	+ 4.73	576,200	464,839	+23.95	19,234,000	20,201,000	14,096,000	Total Inland
TOTAL U. S.	1,154,533	1,111,838	+ 3.84	1,227,466	*1,031,161	+19.03	47,015,000	*48,205,000	40,210,000	TOTAL U. S.
Imports	27,400	10,548	+159.76	.....	.....	.....	.....	.....	.....	Imports
Exports	.....	.....	.....	154,300	154,774	— 0.31	.....	.....	.....	Exports
Average new supply	1,181,933	1,122,386	+ 5.30	.....	.....	.....	.....	.....	.....	Avg. new supply
Avg. ship. to dom. distrib. or users	.....	.....	.....	1,073,166	*876,387	+22.45	.....	.....	.....	Avg. ship. to dom. distributors or users

*Revised

LOWER PRICED
The G&B BARREL PUMP

G & B Barrel Pump equipped with swing return tube.

Meters counting to 100,000 quarts can be fitted at the factory.

LOOKS BETTER
BUILT BETTER
PRICED LOWER

The latest in barrel pumps—quart delivery—modern and attractive in design—with a nozzle that delivers oil in a smooth, non-spattering stream.

Sturdily built to give years of dependable service, this new G & B barrel pump is unusually low in price. It will fit any barrel with a 1½" or 2" opening with no need of bushings or other extra fittings. All working parts are completely enclosed. Available also with swing return tubes and meters.

These new barrel pumps are ready for immediate shipment from our conveniently located warehouses. Write for full information today.

Kerosene Situation by Districts — Barrels

Districts	April 1929 Daily Avg. Output	March Daily Avg. Output	April Change %	April Daily Avg. Shipments	March Daily Avg. Shipments	April Change %	Stocks April 1929	Stocks March 1929	Stocks April 1928	Districts
Gulf Coast Texas..	17,833	19,678	— 9.38	20,167	25,871	—22.05	1,204,000	1,274,000	1,553,000	..Gulf Coast Texas
Gulf Coast Louis...	12,533	14,000	—10.48	17,467	12,161	+43.63	526,000	674,000	1,214,000	..Gulf Coast Louis.
Total Gulf.....	30,366	33,678	— 9.83	37,634	38,032	— 1.05	1,730,000	1,948,000	2,767,000	.....Total Gulf
East Coast.....	24,767	22,935	+ 7.99	24,933	20,484	+21.72	1,148,000	1,153,000	1,497,000	.....East Coast
California.....	23,933	23,839	+ 0.39	26,833	28,871	— 7.06	2,730,000	2,817,000	1,512,000	.....California
Total Coastal....	79,066	80,452	— 1.72	89,400	87,387	+ 2.30	5,608,030	5,918,000	5,776,000	....Total Coastal
Appalachian.....	9,900	9,000	+10.00	10,700	9,290	+15.17	262,000	286,000	269,000	.....Appalachian
Ind., Ill., Ky., etc...	14,700	14,484	+ 1.49	15,667	15,194	+ 3.11	628,000	657,000	811,000	..Ind., Ill., Ky., etc.
Total East Cent.	24,600	23,484	+ 4.75	26,367	24,484	+ 7.69	890,000	943,000	1,080,000	Total East Cent.
Okla., Kans., Mo...	30,333	29,064	+ 4.37	28,233	30,806	— 8.35	658,000	595,000	486,000	..Okla., Kans., Mo.
Inland Texas.....	8,333	7,774	+ 7.19	7,667	7,516	+ 2.01	113,000	93,000	83,000	.....Inland Texas
No. La. and Ark...	1,800	1,645	+ 9.42	1,633	1,710	— 4.50	28,000	23,000	13,000	..No. La. and Ark.
Total Southwest.	40,466	38,483	+ 5.17	37,633	40,032	— 5.99	799,000	711,000	582,000	Total Southwest.
Rocky Mountain...	3,667	3,226	+ 1.37	6,433	5,194	+23.85	200,000	283,000	295,000	..Rocky Mountain
Total Inland....	68,763	65,193	+ 5.48	70,433	69,710	+ 1.04	1,889,000	1,937,000	1,957,000	....Total Inland
TOTAL U. S....	147,829	145,645	+ 1.50	159,833	157,097	+ 1.74	7,497,030	7,855,000	7,733,000	...TOTAL U. S.
Imports.....	700	161	+334.78	.....	.....	.....	.....	.....	.....	.....Imports
Exports.....	.....	.....	.....	55,233	61,258	— 9.84	.....	.....	.....	.....Exports
Average new supply	148,529	145,806	+ 1.86	.....	.....	.....	.....	.....	.....	..Avg. new supply
Avg. ship. to dom. distrib. or users....	.....	.....	.....	104,600	95,839	+ 9.14	.....	.....	.....	Avg. ship. to dom. distributors or users

port demand amounts to only about one-sixth domestic demand.

Domestic production has been 18.75 per cent larger this year than last year but the higher rate of output has not attained alarming proportions so far as it has been in the months when it is customary for refiners to build their stocks of gasoline to meet the demand of the high consuming months which came earlier this year than usual.

Of the 34,636,000 barrels of gasoline produced in April, 20,390,000 barrels or 59 per cent was by straight run process, 10,644,000 barrels or 31 per cent by cracking, and 3,602,000 barrels or 10 per cent natural gasoline. These percentages are the proportions for the first four months of 1929 but in March the proportion of cracked gasoline produced was 30 per cent of the total and the amount of natural gasoline used 11 per cent.

Shipments of gasoline from California to eastern United States ports totaled 2,110,000 barrels in April, as compared with 1,550,000 barrels in March. In the first four months of 1929, this movement totaled 7,218,000 barrels, as compared with 4,314,000 barrels in the first four months of 1928.

There are revisions in the gasoline statistics for March caused by the discovery of 1,000,000 barrels missing from the stocks reported for the East Coast as of March 31. This discovery of stocks is reflected chiefly in the shipments figures for the East Coast which were more than 30,000 barrels daily average less than reported a month ago.

Correction of this error shows the total domestic demand for the first quarter of this year to have been only 9.6 per cent more than domestic demand in the first quarter of 1928, whereas it was shown a month ago to have been 11.13 per cent more this year.

This change in percentages further emphasizes the heavy domestic demand in April which brought the demand for the first four months of this year to 13.96 per cent more than the demand in the first four months of 1928.

Kerosene Supply and Demand — Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1928.....	5,058,000	46,000	2,350,000	2,799,000	7,670,000
February.....	4,749,000	11,000	1,551,000	3,266,000	7,613,000
March.....	4,715,000	6,000	1,852,000	2,722,000	7,760,000
April.....	5,033,000	20,000	1,912,000	3,168,000	7,733,000
Total Four Months.....	19,555,000	83,000	7,665,000	11,955,000	7,733,000
May.....	5,243,000	1,000	2,057,000	3,383,000	7,537,000
June.....	4,849,000	24,000	1,655,000	2,323,000	8,432,000
July.....	4,994,000	19,000	1,834,000	3,141,000	8,470,000
August.....	5,389,000	2,000	1,678,000	3,296,000	8,887,000
September.....	5,060,000	.....	2,090,000	3,264,000	8,593,000
October.....	5,190,000	55,000	1,755,000	3,469,000	8,614,000
November.....	4,908,000	.....	2,091,000	2,545,000	8,886,000
December.....	4,968,000	20,000	1,241,000	3,632,000	9,001,000
1928 Total.....	60,156,000	204,000	22,066,000	38,008,000	9,001,000
January, 1929.....	4,700,000	38,000	1,918,000	2,956,000	8,865,000
February.....	4,435,000	20,000	1,591,000	3,519,000	8,210,000
March.....	4,515,000	5,000	1,899,000	2,976,000	7,855,000
April.....	4,434,000	21,000	1,657,000	3,156,000	7,497,000
Total Four Months.....	18,084,000	84,000	7,065,000	12,607,000	7,497,000
Change This Year Over Like Period Last Year.....	—1,471,000	—1,000	—6,000	+652,000	—236,000
Per Cent.....	—7.52	—1.20	—7.83	+5.45	—3.05

Natural Gasoline

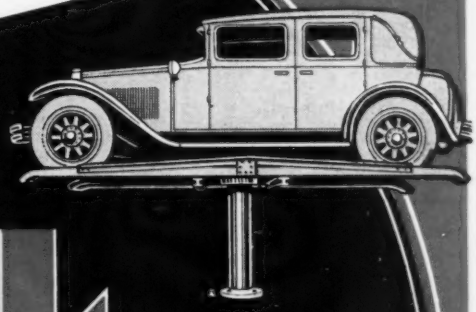
Output of natural gasoline increased 2000 barrels daily average in April over March production. The gain was about equally divided between plants in California and those east of California. Stocks increased 141,800 barrels.

Both production and stocks of natural gasoline motor fuels blended out-

Daily Average Runs to Stills — All Oils — Barrels

	East Coast	Appalachian	Ind.-Ill.	Okla.-Kans.	Texas	La.-Ark.	Rocky Mt.	Calif.	Total U. S.	
January, 1928.....	478,032	84,613	247,097	288,645	482,613	202,064	85,936	570,161	2,439,161	.....January, 1928
February.....	497,723	86,690	250,793	294,552	510,586	201,518	83,207	587,690	2,512,759	.....February
March.....	466,193	88,548	268,000	306,065	523,548	203,839	89,064	593,968	2,539,225	.....March
April.....	499,900	92,933	272,900	319,200	533,967	218,233	93,433	599,300	2,629,867	.....April
May.....	502,613	98,322	296,290	331,903	540,613	237,290	101,774	584,032	2,692,839	.....May
June.....	541,867	101,233	310,767	332,500	532,233	216,900	96,867	625,833	2,758,200	.....June
July.....	525,903	102,065	313,742	338,646	567,967	212,258	97,935	639,484	2,798,000	.....July
August.....	525,355	103,645	323,161	357,968	589,710	221,774	102,000	634,613	2,858,226	.....August
September.....	532,367	108,200	329,967	364,033	569,200	246,000	102,067	640,900	2,892,734	.....September
October.....	503,838	102,193	315,935	346 419	573,258	243,968	101,033	638,710	2,825,354	.....October
November.....	497,467	101,600	322,000	328 400	597,367	237,600	95,167	646,233	2,825,834	.....November
December.....	501,097	108.548	310,032	328 935	563,064	237,097	91,032	677,806	2,809,611	.....December
January, 1929.....	496,774	98,452	304,290	318,161	576,129	227,355	92,613	676,097	2,789,871	.....January, 1929
February.....	501,178	94,071	308,143	316 036	629,928	235,000	89,714	664,036	2,838,107	.....February

NO PACKING GLAND!



A VITAL ADVANTAGE

found in NO OTHER hoist

"NO PACKING gland" — just a short phrase but it carries a big message. It means a tremendous saving in operating power, less air required, because there's no unnecessary pressure between piston and cylinder wall. It means easier rotating, because there's no tight-bound collar around the piston to create friction that interferes with free movement of the hoist. It means no oil leakage, because the oil is kept below the piston itself.

Globe's patented design keeps pressure concentrated against the base of the piston; every ounce of pressure does its full share of lifting. This outstanding advantage of Globe Hoists is backed by the experience gained through years of hoist-building—proved by hundreds of operating records which show that Globe Hoists have the lowest maintenance expense—recognized by a constantly growing list of important oil companies who have standardized on Globe for all installations.

These companies have ceased to think of the Globe Hoist as an expense. They know it is a genuine investment, that pays bigger cold-cash dividends because the Globe is a better Hoist.

GLOBE MACHINERY & SUPPLY CO.
DES MOINES, IOWA

7 Points of Superiority

1. Absolute safety
2. Less air pressure required
3. All oil below piston—no leakage possible
4. No surface drainage
5. Rotates and operates easier
6. Quicker, more economical installation
7. Oil tank below frost line

A higher type of GREASING SERVICE

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GLOBE Auto HOIST

SAFER — QUICKER — BETTER

Lubricant Situation by Districts — Barrels

Districts	April 1929 Daily Avg. Output	March 1929 Daily Avg. Output	April Change %	April Daily Avg. Shipments	March Daily Avg. Shipments	April Change %	Stocks April 1929	Stocks March 1929	Stocks April 1928	Districts
Gulf Coast Texas	21,000	23,161	— 9.33	23,167	16,839	+37.58	2,124,000	2,189,000	1,586,000	Gulf Coast Texas
Gulf Coast Louis.	2,800	2,355	+18.90	2,300	2,323	— 0.99	124,000	109,000	113,000	Gulf Coast Louis.
Total Gulf	23,830	25,516	— 6.73	25,467	19,162	+32.90	2,248,000	2,298,000	1,699,000	Total Gulf
East Coast	30,233	27,903	+ 8.35	32,867	17,903	+83.58	2,829,000	2,908,000	2,866,000	East Coast
California	5,633	5,934	— 5.07	5,200	8,000	—35.00	905,000	892,000	775,000	California
Total Coastal	59,666	59,352	+ 0.53	63,534	45,065	+40.98	5,982,000	6,098,000	5,340,000	Total Coastal
Appalachian	14,500	14,226	+ 1.93	21,767	14,387	+51.30	1,018,000	1,236,000	1,086,000	Appalachian
Ind., Ill., Ky., etc.	11,200	10,774	+ 3.95	14,233	12,742	+11.70	651,000	742,000	841,000	Ind., Ill., Ky., etc.
Okla., Kans., Mo.	7,767	7,291	+ 6.53	9,667	8,742	+10.58	468,000	525,000	543,000	Okla., Kans., Mo
Inland Texas	1,200	1,194	+ 0.50	1,267	1,194	+ 6.11	63,000	65,000	76,000	Inland Texas
N. La. and Ark.	568	258	+120.15	501	226	+121.68	6,000	4,000	2,000	N. La. and Ark.
Rocky Mountain	1,733	1,839	— 5.76	2,733	2,291	+19.29	153,000	183,000	130,000	Rocky Mountain
Total Inland	36,968	35,581	+ 3.90	50,168	39,582	+26.74	2,365,000	2,755,000	2,678,000	Total Inland
TOTAL U. S.	96,634	94,935	+ 1.79	113,702	84,647	+34.32	8,347,000	8,853,000	8,018,000	TOTAL U. S.
Imports	100	64	+56.25	.....	.....	.....	.....	.....	.....	Imports
Exports	.....	.....	.....	26,200	33,710	—22.28	.....	.....	.....	Exports
Avg. new supply	96,734	94,999	+ 1.83	.....	.....	.....	.....	.....	.....	Avg. New supply
Avg. ship. to dom. distributors or users	.....	.....	.....	87,502	50,937	+71.78	.....	.....	.....	Avg. ship. to dom. distributors or users

side refineries increased in April over March production and stocks.

Kerosene

Domestic production of kerosene was 1.5 per cent more on the daily average in April than in March. All districts except the Gulf Coast stepped up output.

Shipments of kerosene were 1.74 per cent larger daily average than in March and stocks were lowered 358,000 barrels. Stocks April 30, 1929, were 236,000 barrels smaller than stocks April 30, 1928.

In the first four months of 1929 domestic production was 7.52 per cent less than in the first four months of 1928. Domestic demand was 5.45 per cent more. Imports were 1.2 per cent less and exports 7.83 per cent less. The gain in domestic demand more than offset in volume the loss in export trade.

Lubricating Oils

Domestic production of lubricating oils was 1.79 per cent larger in April than in March. All districts but Gulf Coastal Texas, California and the Rocky Mountain speeded output. Shipments were larger than March shipments in all but Coastal Louisiana and California districts. Stocks were reduced 506,000 barrels during April.

In the first four months of 1929, domestic output of lubricating oils almost balanced output in the first four months of 1928. Imports were unimportant. Domestic demand was 0.29 per cent larger this year and export demand was 4 per cent larger. Stocks April 30, 1929, were 323,000 barrels or 4.03 per cent larger than stocks April 30, 1928.

Paraffin Wax

Domestic production, imports, exports and domestic demand for paraffin wax were larger than in March. Stocks of wax increased more than 12,000,000 pounds.

Since Jan. 1, stocks of paraffin wax have increased more than 60,000,000 pounds in this country. The reason for this large accumulation has been due to the severe break in both foreign and domestic demand.

Ordinarily about 60 per cent of the American wax output is exported and 40 per cent is consumed in this country. The export demand to the end of April this year was 35.39 per cent less than exports in the first four months of 1928. In pounds the decline was approximately 54,000,000 pounds.

Domestic demand in the four months was 29.73 per cent or approximately 32,000,000 pounds less than a year before.

Stocks of wax have risen steadily since last August.

Lubricating Oil Supply and Demand — Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1928	2,654,000	.....	934,000	1,592,000	7,988,000
February	2,728,000	.....	841,000	1,543,000	8,332,000
March	2,878,000	.....	837,000	1,990,000	8,383,000
April	3,027,000	1,000	1,059,000	2,334,000	8,018,000
Total Four Months	11,287,000	1,000	3,671,000	7,459,000	8,018,000
May	3,091,000	3,000	1,063,000	1,989,000	8,060,000
June	3,009,000	1,000	1,095,000	2,143,000	7,832,000
July	2,828,000	1,000	1,063,000	1,931,000	7,667,000
August	2,891,000	1,000	813,000	2,035,000	7,711,000
September	2,833,000	1,000	808,000	1,995,000	7,742,000
October	2,979,000	1,000	769,000	2,123,000	7,830,000
November	2,748,000	1,000	895,000	1,763,000	7,921,000
December	2,993,000	3,000	878,000	1,699,000	8,340,000
1928 Total	34,659,000	13,000	11,055,000	23,137,000	8,340,000
January, 1929	2,945,000	1,000	1,116,000	1,521,000	8,649,000
February	2,503,000	4,000	871,000	1,751,000	8,534,000
March	2,943,000	2,000	1,045,000	1,581,000	8,853,000
April	2,899,000	3,000	786,000	2,628,000	8,341,000
Total Four Months	11,290,000	10,000	3,818,000	7,481,000	8,341,000
Change This Year Over Like Period Last Year	+3,000	+9,000	+147,000	+22,000	+323,000
Per Cent	+0.03	+900.00	+4.00	+0.29	+4.03

Paraffin Wax Supply and Demand — Pounds

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1928	55,378,000	1,117,000	39,712,000	17,696,000	149,725,000
February	49,158,000	1,337,000	38,036,000	25,705,000	136,479,000
March	50,170,000	1,767,000	40,147,000	28,747,000	119,522,000
April	57,548,000	2,996,000	34,122,000	36,235,000	109,709,000
Total Four Months	212,254,000	7,217,000	152,017,000	108,383,000	109,709,000
May	51,072,000	1,855,000	34,826,000	24,171,000	103,639,000
June	50,792,000	1,715,000	33,594,000	30,563,000	91,989,000
July	45,273,000	2,226,000	35,290,000	19,722,000	84,476,000
August	54,429,000	2,793,000	31,446,000	30,630,000	79,622,000
September	50,428,000	1,880,000	26,396,000	20,117,000	85,417,000
October	54,546,000	1,930,000	26,281,000	22,798,000	92,814,000
November	56,665,000	2,994,000	25,170,000	23,354,000	103,949,000
December	54,685,000	2,138,000	26,603,000	23,825,000	110,344,000
1928 Total	630,144,000	24,748,000	391,623,000	303,563,000	110,344,000
January, 1929	58,885,000	2,982,000	28,065,000	20,625,000	123,521,000
February	50,027,000	3,120,000	25,359,000	11,256,000	140,053,000
March	56,372,000	2,575,000	22,127,000	18,469,000	158,404,000
April	57,976,000	2,680,000	22,664,000	25,709,000	170,687,000
Total Four Months	223,260,000	11,357,000	98,215,000	76,059,000	170,687,000
Change This Year Over Like Period Last Year	+11,006,000	+4,140,000	—53,802,000	—32,224,000	+60,978,000
Per Cent	+5.19	+57.36	—35.39	—29.73	+55.58

Unapproached Leadership

Cincinnati Globes are unequalled for length of service, beauty, strength and master workmanship. They combine sturdy and durable construction with lasting color effects and clean cut lettering. Write us today—let us show you why Cincinnati Globes are superior, why leading oil marketers prefer them above all others.

THE CINCINNATI ADVERTISING PRODUCTS CO.

If desired our Art Department will create a new design for you.

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Large or small orders receive the same careful attention and prompt shipment.

Cincinnati Globes attract more attention—pull more trade—because their designs are super-brilliant. And this brilliance endures. The colors are part of the glass itself—and can never fade, chip, or oxidize . . . . . A Cincinnati Globe is as brilliant after years of service as the day it was put up . . . . . When you choose Cincinnati Globes you choose the globes preferred by the leaders of the industry because of their trade-pulling efficiency—and economical cost—first and last.

CINCINNATI GLOBES

SELL MORE GASOLINE AND OILS

Gas and Fuel Oil Situation by Districts — Barrels

Districts	April 1929 Daily Avg. Output	March Daily Avg. Output	April Change %	April Daily Avg. Shipments	March Daily Avg. Shipments	April Change %	Stocks April 1929	Stocks March 1929	Stocks April 1928	Districts
Gulf Coast Texas..	168,167	169,452	— 0.76	170,300	168,258	+ 1.21	8,556,000	8,620,000	6,515,000	..Gulf Coast Texas
Gulf Coast Louis...	60,367	54,742	+10.28	37,967	63,871	—40.56	4,880,000	4,208,000	4,298,000	..Gulf Coast Louis.
Total Gulf.....	228,534	224,194	+ 1.94	208,267	232,129	—10.28	13,436,000	12,828,000	10,813,000	.....Total Gulf
East Coast.....	251,133	248,677	+ 0.99	213,433	250,839	—14.91	5,731,000	4,600,000	8,657,000	.....East Coast
California.....	382,900	382,161	+ 0.19	.....	.....	.....	.....	.....	.....	.....California
Total Coastal....	862,567	855,032	+ 0.88	421,700	482,968	—12.68	19,167,000	17,428,000	19,470,000	....Total Coastal
Appalachian.....	22,533	19,484	+15.65	22,366	21,000	+ 6.50	1,029,000	1,024,000	940,000	.....Appalachian
Ind., Ill., Ky., etc...	95,500	93,226	+ 2.44	86,101	89,516	— 3.81	2,386,000	2,104,000	1,369,000	..Ind., Ill., Ky., etc.
Okla., Kans., Mo...	106,867	101,645	+ 5.14	85,766	97,065	—11.64	5,316,000	4,683,000	4,569,000	..Okla., Kans., Mo.
Inland Texas.....	101,633	78,000	+30.30	87,933	78,355	+12.22	3,129,000	2,718,000	1,541,000	.....Inland Texas
N. La. and Ark.....	42,667	43,548	— 2.02	38,367	38,613	— 0.64	1,291,000	1,162,000	681,000	....N. La. and Ark.
Rocky Mountain...	19,333	17,323	+11.60	19,000	16,097	+18.03	1,086,000	1,076,000	929,000	...Rocky Mountain
Total Inland....	388,533	353,226	+10.00	339,533	340,646	— 0.33	14,237,000	12,767,000	10,029,000	....Total Inland
TOTAL U. S.....	1,251,100	1,208,258	+ 3.55	761,233	823,614	— 7.57	33,404,000	30,195,000	29,499,000	....TOTAL U. S.
Imports.....	59,266	36,968	+60.32	.....	.....	.....	.....	.....	.....	.....Imports
Exports.....	.....	.....	.....	96,400	83,871	+14.94	.....	.....	.....	.....Exports
Avg. new supply...	1,310,366	1,245,226	+ 0.52	.....	.....	.....	.....	.....	.....	...Avg. new supply
Avg. ship. to dom. distributors or users	.....	.....	.....	664,833	739,743	—10.13	.....	.....	.....	Avg. ship. to dom. distributors or users

Gas and Fuel Oils

Output of gas and fuel oils at refineries was 3.55 per cent larger in April than in March. Production was curtailed in only Coastal Texas and North Louisiana-Arkansas districts. East of California shipments were 7.57 per cent less on the daily average than March shipments.

Stocks of fuel and gas oil east of California rose more than 3,000,000 barrels in April, and on April 30 were approximately 3,900,000 barrels larger than a year before. These fuel and gas oil stocks account in large measure for the increase in above-ground stocks of all oils in April.

The April report, produced under the supervision of G. R. Hopkins of the Bureau of Mines, covered the operatings of 335 refineries which were being operated at 80 per cent of their rated intake capacity, 3,355,000 barrels a day. In March 330 refineries reported operating at 78 per cent of their rated capacity.

Gas and Fuel Oil Supply and Demand — Barrels

	Production	Imports	Exports	Domestic Shipments	*Stocks End of Month
January, 1928.....	33,013,000	553,000	4,175,000	.....	30,665,000
February.....	31,897,000	666,000	3,420,000	.....	29,560,000
March.....	34,437,000	848,000	3,969,000	.....	29,104,000
April.....	33,870,000	1,176,000	4,211,000	.....	29,669,000
Total Four Months.....	133,217,000	3,243,000	15,775,000	.....	29,669,000
May.....	35,620,000	784,000	3,612,000	.....	32,887,000
June.....	35,765,000	468,000	4,238,000	.....	36,085,000
July.....	36,754,000	484,000	4,261,000	.....	36,410,000
August.....	37,390,000	515,000	3,420,000	.....	39,236,000
September.....	37,004,000	397,000	3,226,000	.....	39,900,000
October.....	36,941,000	320,000	3,356,000	.....	39,599,000
November.....	35,771,000	411,000	3,320,000	.....	37,878,000
December.....	37,293,000	646,000	3,254,000	.....	34,926,000
1928 Total.....	425,755,000	7,268,000	44,462,000	.....	34,926,000
January, 1929.....	36,838,000	335,000	3,699,000	.....	32,522,000
February.....	34,331,000	466,000	2,795,000	.....	30,118,000
March.....	37,456,000	1,146,000	2,600,000	.....	30,195,000
April.....	37,533,000	1,778,000	2,892,000	.....	33,404,000
Total Four Months.....	146,168,000	3,725,000	11,986,000	.....	33,404,000
Change This Year Over Like Period Last Year.....	+12,951,000	+482,000	—3,789,000	.....	+3,735,000
Per Cent.....	+9.72	+14.86	—24.02	.....	+12.59

*East of California only.

Pennzoil Co. Files Infringement Suit

CLEVELAND, June 14.—The Pennzoil Co. of Oil City has filed suit against the Commonwealth Oil Co. of Cleveland, alleging infringement of its trade name and substitution. The case was filed in the U. S. District Court for the northern Ohio district.

In its petition the Pennzoil Co. charges that the Commonwealth has been selling an oil under the name "Pennoil" and "100% Pennoil." These names are alleged to be so nearly like "Pennzoil" that consumers are confused and deceived.

The Commonwealth has been a contract customer of The Columbia Refining Co., a Pennzoil subsidiary, through which it has been buying some Pennzoil. It is charged that the Commonwealth has been displaying both Pennzoil and Pennoil signs and globes at its stations since June, 1928, and has refused to discontinue the use of the latter. The charge is made that inferior oils have been sold customers asking for Pennzoil.

An injunction against the use of the trade names "Pennoil" and "100% Pennoil" is asked in the petition. In addition an accounting and damages equal to three times the profits on "Pennoil" sales are sought. The firm of Chamberlin, Marty & Fuller is representing the Pennzoil Co.

First National Oil Show To Be Next January

CLEVELAND, June 15.—The National Oil Show, Inc., will hold its first convention and exhibit at the Sherman hotel, Chicago, Jan. 19 to 25, 1930. This was decided at a recent meeting of directors held at Chicago.

S. W. Foran of the Bennett Pumps Corp., was elected vice-president at the meeting and Manley H. Simmons of the Enameled Steel Sign Co., was made chairman of the membership committee. Appointment of Lou Harrington as managing director was confirmed.

July 1 was set as a final date for receiving charter membership applications. It was announced that the organization now has 50 members.

Dixie Advertising Begun By Nebraska Group

CLEVELAND, June 15.—Dixie Distributors, Inc. of Nebraska, have begun a cooperative advertising campaign in newspapers in that state and through posters and signs. Orders have been placed for 200 road signs and contracts have been signed for space on 50 billboards.

O. J. Shaw of Lincoln, is president and E. Neustrom of Upland, is secretary of the Dixie dealers in Nebraska.

New Farm Device Burns Kerosene

CLEVELAND, June 15.—An oil-burning milk chiller designed for use in rural districts where low rate central station power is not available, has been placed on the market by the Perfection Stove Co. here.

The milk chiller, like the household refrigerator announced by the company recently, generates refrigeration from burning kerosene. Forty ounces of kerosene is sufficient for reducing from 15 to 35 gallons of milk from animal temperatures to around 40 degrees in about an hour and a quarter, the company claims.

Compensator Tubes

And The Useful Function They Perform In

QUALITY
TOKHEIM
Cut 660-5
10 Gallon Visible Pumps

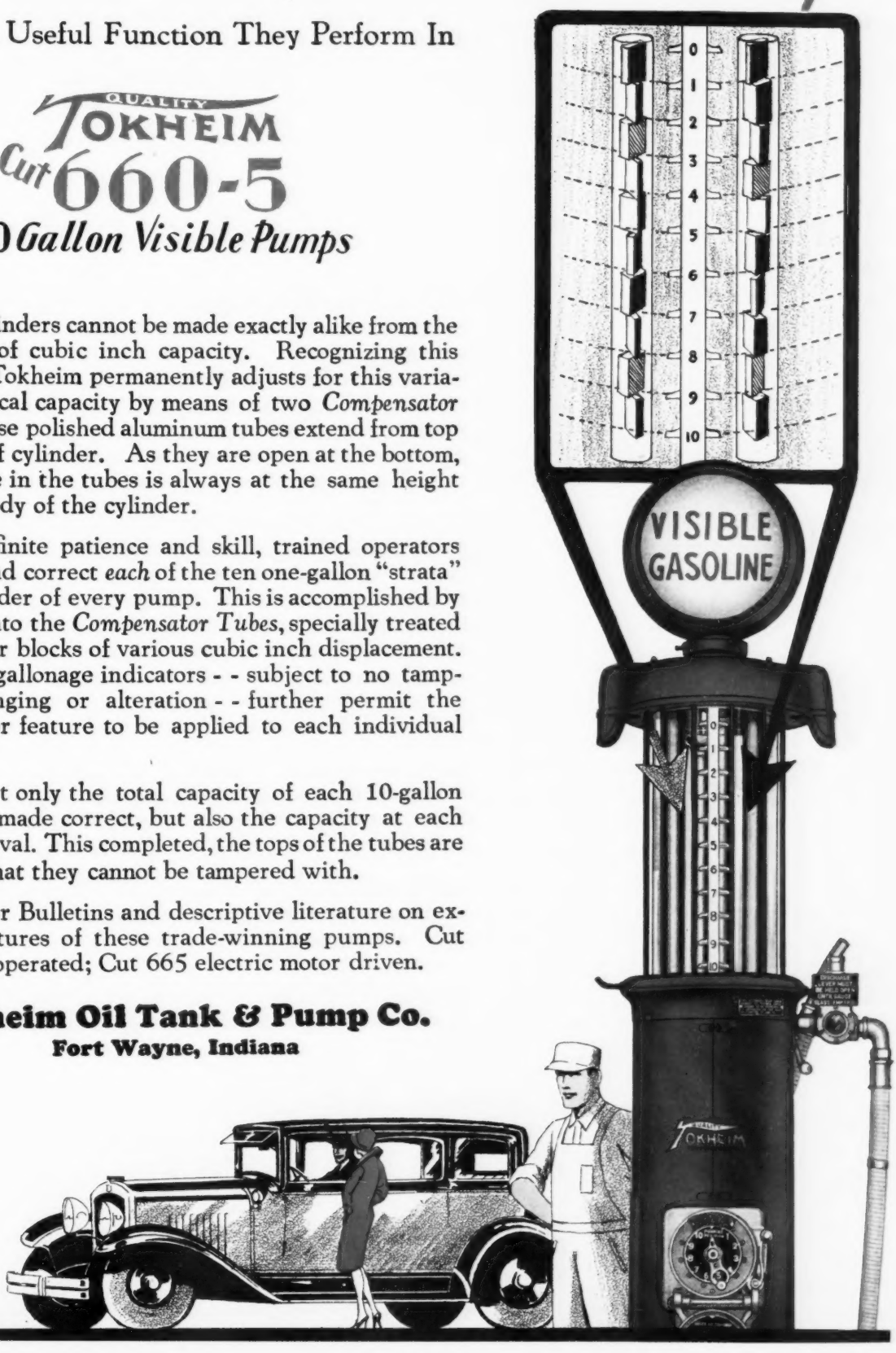
Glass cylinders cannot be made exactly alike from the standpoint of cubic inch capacity. Recognizing this condition, Tokheim permanently adjusts for this variation in cubical capacity by means of two *Compensator Tubes*. These polished aluminum tubes extend from top to bottom of cylinder. As they are open at the bottom, the gasoline in the tubes is always at the same height as in the body of the cylinder.

With infinite patience and skill, trained operators calibrate and correct *each* of the ten one-gallon "strata" in the cylinder of every pump. This is accomplished by dropping into the *Compensator Tubes*, specially treated compensator blocks of various cubic inch displacement. One piece gallonage indicators - - subject to no tampering, changing or alteration - - further permit the compensator feature to be applied to each individual gallon.

Thus, not only the total capacity of each 10-gallon cylinder is made correct, but also the capacity at each gallon interval. This completed, the tops of the tubes are sealed so that they cannot be tampered with.

Write for Bulletins and descriptive literature on exclusive features of these trade-winning pumps. Cut 660 hand operated; Cut 665 electric motor driven.

Tokheim Oil Tank & Pump Co.
Fort Wayne, Indiana



This 1500-gallon Smith-Hamburg-Scott syphon tank has been approved for delivery of gasoline in New York City

New York Approves Another Truck Tank

NEW YORK

THE gasoline truck tank monopoly in New York city has been broken by final approval of the tank of the Smith-Hamburg-Scott Welding Co. This company is now building more than 75 1500-gallon truck tanks for one company for use in New York City. The company's headquarters are in Long Island City.

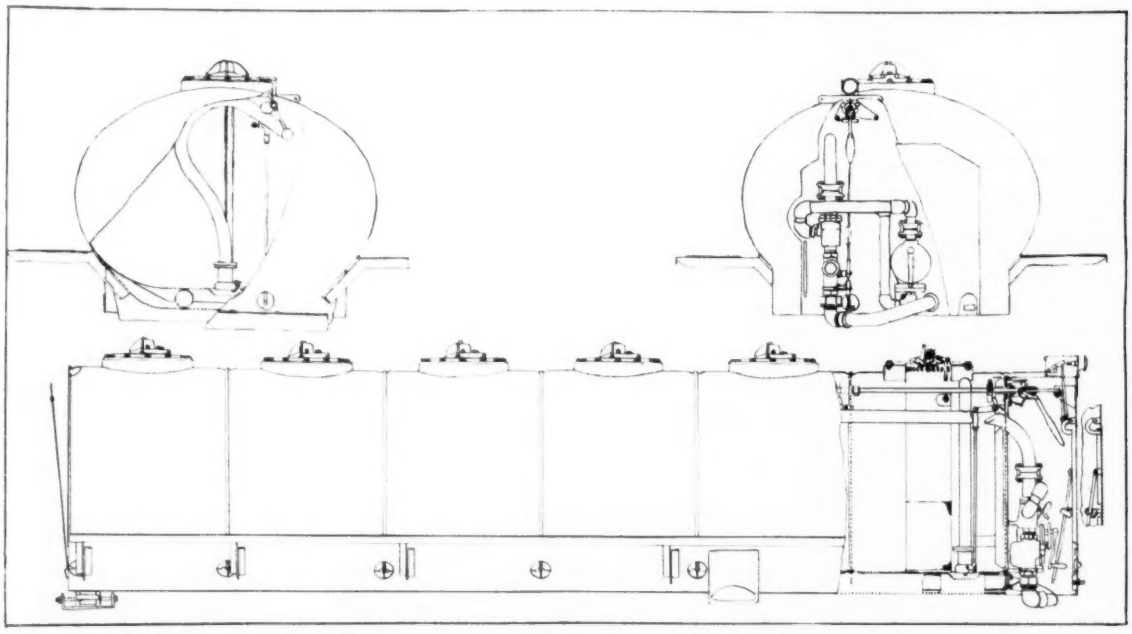
A tank submitted by the Davis Welding & Mfg. Co., Cincinnati, apparently has passed the drop and fire tests required by the New York Fire Department but final approval is never given a tank until one is bought by an oil company and the oil company applies for a permit to use it on the streets of New York.

New York has permitted delivery of gasoline in tank trucks for more than four years but until last month only one tank had been approved by city fire officials. That tank was distributed in New York by a company in which William F. Kenny, the financial backer of former Governor Alfred E. Smith, and his brothers were interested.

The New York specifications for tanks were the most severe ever required, because, it was asserted by the New York City officials, the fire and accident hazard in New York is greater than in any other American city.

All gasoline tanks must have only a syphon and not a gravity discharge. The maximum size is 1500 gallons and no compartment must contain more than 250 gallons. Bulkheads between the compartments must protrude beyond the shell. Cabs must be built of non-combustible material and only one cab so far has been approved. That one is also distributed by the Kenny company.

The trucks must have a two-wire



Cutaway diagram of Smith-Hamburg-Scott 1500-gallon syphon tank approved by New York City for hauling gasoline. The sketch in the upper left corner shows a swan-neck syphon tube in a compartment. The sketch in the upper right corner shows the piping arrangement, syphon breaker, and in the center the hand operated rotary pump with which the syphon flow is created. At the right of the bottom sketch is a side view of the piping arrangements and syphon tubes

electrical system instead of the customary one wire system in which all ground wires lead to the frame. Exhaust pipes and mufflers must not extend under the gasoline tank, and must be placed crosswise the frame.

The foregoing are a few of the unusual features of the New York specifications.

The Smith-Hamburg-Scott company brought suit last year in which it charged that the specifications were illegal in that they were built around a patented article—the protruding bulkheads. It sought to enjoin the Kenny company, the Tank & Accessories Corp., from selling any more tanks for use in New York and to have the court mandamus the New York fire commissioner to approve its product. A temporary injunction against the Tank & Accessories Corp. was granted.

The Davis company intervened and said it had a tank with protruding bulkheads which did not infringe on the patents of the Columbian Steel Tank Co., which made the tanks the Kenny company was distributing.

Smith-Hamburg-Scott redesigned its tank so as to have protruding bulkheads instead of lapweld heads inside a one-piece shell for which type of construction it first sought approval.

The tank which the Davis company has used in making apparently successful endeavors in the drop and fire tests in New York, has protruding bulkheads.

The drop tests consist in filling the tank with water and dropping it four feet to a concrete slab. The fire tests consist of filling it with gasoline and then letting a fire burn around it until the gasoline boils.

The Smith-Hamburg-Scott suits have been dropped.

Digest of Inspection Laws Published

TULSA, June 15.—The Western Petroleum Refiners Association has completed and printed a digest of state inspection laws relating to petroleum products. The book contains 100 pages.

The preface states that the digest was compiled for the purpose of accurately and concisely recording the more essential provisions of the laws of the various states relating to the manufacture, use or sale of petroleum products.

At the time the book was printed the legislatures of Illinois, Michigan and Missouri were still in session and there were possibilities changes would be made in the laws in those states prior to the adjournment of the legislatures. The association will mail to holders of the digest a complete draft of the laws of these states as soon as possible after the close of the legislatures.

1879 GOLDEN ANNIVERSARY YEAR 1929

it is not enough that you specify . . .

100% Pennsylvania Motor Oils

Don't specify simply "100% Pennsylvania Motor Oils." Specify "FREEDOM 100% Pennsylvania Motor Oils."

Then you sell a perfected blend made from 460-470 flash Bright Stock (Sharples Process) and 100% Pennsylvania Crude high flash Neutrals.

Both are made in the two complete plants of an organization which for fifty years has specialized in the refining of 100% Pennsylvania Crude. The Bright stocks are refined in the Coraopolis plant and the Neutrals in the Freedom plant.

All the experience of fifty years has gone into FREEDOM 100% Pennsylvania Motor Oil. Sell it—fear no competition. Write for quotations. Deliveries available in tank cars, compartment tank cars, barrels, or drums.

Guaranteed 100% PURE PENNSYLVANIA OIL

Permit No. 31

Also available for immediate shipment

460-470 flash, minimum 85 Visc., low cold test Bright Stock (Sharples process).

FREEDOM 100% Pennsylvania Crude high flash Neutrals.

100% Pennsylvania Motor Oils, blended to your own specifications from FREEDOM 460-470 Bright Stock and FREEDOM 100% Pennsylvania Crude high flash Neutrals.

FREEDOM 600 Steam Refined.

FREEDOM filtered low end point Kerosene.

THE FREEDOM OIL WORKS COMPANY
Freedom, Penna.

Established 1879

Refineries at Freedom and Coraopolis, Pennsylvania

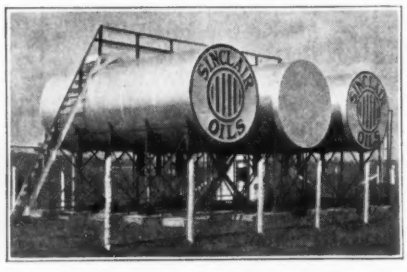
FREEDOM

Truck Beauty with Utility

The Added Advertising Value is an Important Part of Every STANDARD *Truck Tank!*

Other STANDARD *Products*

Bulk Storage Tanks
Delivery Cans — Buckets
Filling Station Equipment (complete)
Gasoline Pumps (visible)
Oil Burners (for Heaters)
Oil Pumps
Structural Steel Supports for Storage Tanks
Swing Joints
Truck Tanks (all Designs and Sizes)
Unloading Racks — Valves
Couplings



Bulk Station Equipment

Most of the famous names in the Marketing and Refining industry are found on STANDARD Bulk Storage Tanks throughout the nation.

A New Shell Truck by STANDARD

THIS striking Shell Truck for the Beach Oil Company is expressive of STANDARD'S newest Truck Tank design. It is a 600 gallon capacity, 3 compartment STANDARD Tank mounted on a 2-ton Mack Truck. Note the attractive 12 inch pressed steel expansion domes, the improved can racks and side barrel carriers.

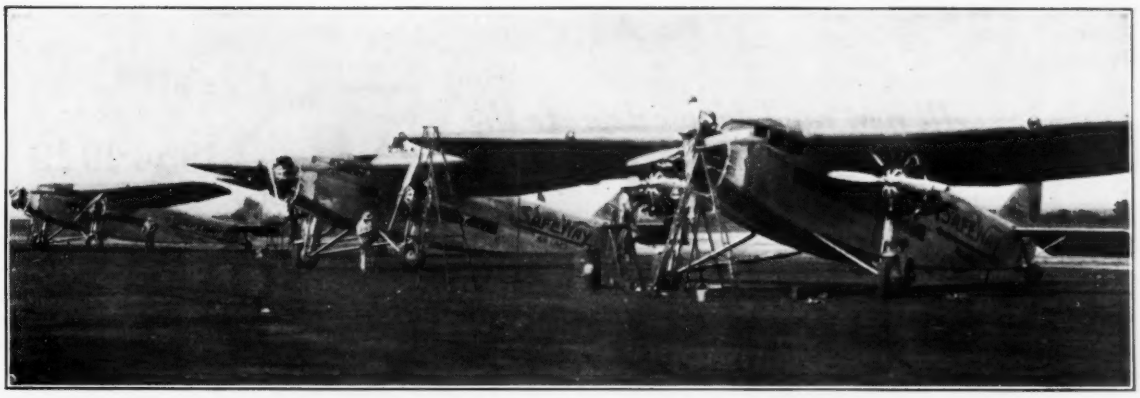
To protect your Truck Tanks against the twisting strains and the shocks of rapid transportation, specify STANDARD Tri-Point Suspension and STANDARD Shock Absorbing Saddle Strap Supports. Tri-Point Suspension keeps the horizontal axis of your tank always in the same plane, regardless of irregular movements of the chassis. Saddle Strap Supports cushion the tank against all road shocks. STANDARD Truck Tanks *built to your own specifications* with or without these features.

Among STANDARD users are: Sinclair Refining Company, Phillips Petroleum Company, Marland Refining Company, Mid-Continent Petroleum Corporation, Shell Petroleum Corporation, Independent Oil and Gas Company, Beach Oil Company, Pierce Oil Company.

Write or Wire for Details and Special Quotations

Standard Steel Works

North Kansas City, Mo., U.S.A.



About $200,000 worth of planes being inspected and groomed for the next day's trips, at the Tulsa municipal airport. These planes are only part of the fleet the Southwest Air Fast Express operates out of Tulsa. The Tulsa airport includes 460 acres. Ships arrive at the rate of about 100 a week

'The Magic Carpet' Now Serves Industry

TULSA

By V. B. Guthrie
N. P. N. MANAGING EDITOR

VERY few business men appreciate the extent to which commercial flying is fitting into the accelerated tempo at which business is done today—and at a low enough cost over railroad fare that the saving in time more than makes up for the difference in the fare.

Particularly is this true in the oil country of Oklahoma, Kansas and Texas, where distance between towns is much greater than back in the east, and also where climate and ground conditions are favorable for flying most of the year.

From a comparison of the flying schedule of the Southwest Air Fast Express with railroad schedules in the same territory — which comparison was made, by the way, while enjoying a peaceful pipe on a trip by plane from St. Louis to Tulsa—it is apparent that the business man coming from the east and north can save almost a day's time each way on his trip by using a plane. This holds true for other lines flying planes than the S.A.F.E. and for an increasing number of individuals and companies using privately owned planes.

For example, this writer has been making the trip from Cleveland to St. Louis in connection with NATIONAL PETROLEUM NEWS business for almost 15 years. That trip has been made each way several times a year. Each time it has meant two lost days as far as contact with a NATIONAL PETROLEUM NEWS office was concerned. For his own ease of mind this writer would hesitate to figure out just how much "lost" time that has amounted to.

Of course, it cannot all be figured as lost time. On many occasions visits with St. Louis oil men have been made with advantage; but even as good friends as these cannot give over their time, on many occasions during the year, to help an outsider hatch up an idea that would compensate for an otherwise idle day.

Many of these days have been Sundays, and reading and study has been carried on upon other occasions. But, all told, the ball park and the movies have had considerable business that was rather grudgingly granted them on these trips, because one's feet do get tired just walking around on the pavements.

NATIONAL PETROLEUM NEWS *editorial men use planes when occasion demands in covering news developments in the oil industry. V. B. Guthrie, managing editor, is shown alighting from a plane at the Tulsa airport. Coming by plane from St. Louis gave him an extra half day at Tulsa before going on to the Colorado Springs conference*

Taking advantage of this new order in transportation, one may leave Cleveland by train, at six in the evening, after the office work for the day has been cleared. On his arrival in St. Louis in the morning, he will be picked up at the station by a bus from the S.A.F.E. lines and carried to Lambert field. There, at 8:30, he boards a comfortable cabin plane seating 14 passengers, driven by three motors, and attended by a captain and mate. With one stop at Springfield, Mo., he is at the Tulsa municipal airport, and quickly whisked to office or hotel by lunch time. The net saving in office time is half a day, and an extra night of travel is avoided.

That's traveling at more than 100 miles an hour. Droning steadily along in the air, however, one has little idea of speed. The woods and geometrically precise cultivated fields unroll under the eyes like a huge wall map, in color, being pulled down. It is only when your eyes catch an auto on the road than an idea of the speed of the plane is gained. That motor car, on a paved road in the country, is probably traveling at least 40 miles an hour, yet it seems almost to be anchored.

ANOTHER personal instance of the saving in business time by flying. It was necessary on this last trip to Tulsa to see a man in Oklahoma City. That individual could not spare time from his office to make the trip, which ordinarily would have taken a day away from Oklahoma City. On this occasion he left Oklahoma City by plane at five in the afternoon, after his day's work in the office was over. He was in Tulsa at six for dinner. We had six hours together and the visitor took a sleeper back home at midnight. His office associates the next day did not know he had been out of town.

By planes of the Southwest Air

All new models to celebrate the
Curtis "75th Anniversary" 1854-1929

The Timken-bearing compressor line

FOR years, compressed air meant only "free service". Now it is becoming an important revenue producer in garages and service stations. The use of air for operating lifts, tools, car washers, cleaning attachments, grease guns, etc. has led to a demand for a higher standard in compressor design.

* * *

Curtis is the first to meet this demand by producing a compressor that is in all respects equal to automotive standards of construction. Note the new features.

* * *

To permit higher speeds, minimize friction and greatly lengthen bearing life, Timken tapered roller bearings have been adopted, as in the finest automobiles. They are adjustable for wear and the taper of the bearing takes care of end thrust. The improvement means a real increase in the efficiency of the compressor.

* * *

The Curtis positive "Centro-Ring" oiling system delivers oil under pressure to the bearings, and also throws oil onto "distributing ribs" which conduct it accurately to all lubrication points. Thus, perfect lubrication is assured, with a great saving of oil.

* * *

Other improvements of first importance are described in the new "75th Anniversary" catalog. Can you afford to be without this information? Catalog and cost data will be sent promptly on request.

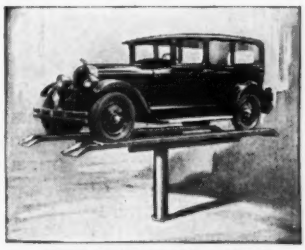
Write for new Catalog C-75

CURTIS

This company was founded in 1854; is, therefore, in its *seventy-fifth* year. Three quarters of a century of successful business existence can be explained only by [1] integrity, [2] sound policy, and [3] financial strength to permit the extensive development and research work necessary to keep our product in advance of competition.

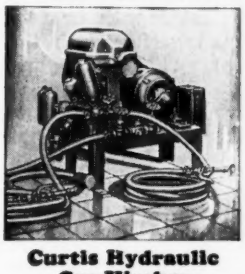
The TIMKEN BEARING Compressor Line

1854 CURTIS *1929*
75th Anniversary Line



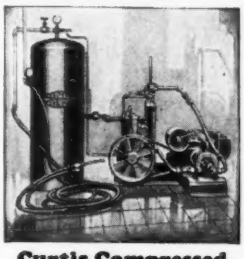
Curtis Rotating Lift

Curtis Rotating Lift increases your profits because it [1] attracts customers.[2]cutstime-cost. Inspecting, lubricating and repairing done in half the time. Lets the customer see the work. This is the *safe* lift for you and for the car. Lift always held in position by positive **oil lock. Flush stuffing box design;** no pits or recesses. Roll-on or free wheel type.



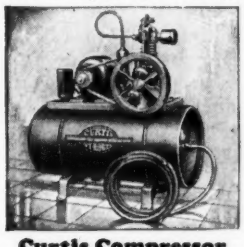
Curtis Hydraulic Car Washer

Curtis Hydraulic Car Washer—A low-priced self-contained outfit. One and two gun sizes. New slow speed **pump, fully enclosed and self-oiling,** specially designed by Curtis for car-wash service. Flooded and direct self-oiling systems. Special alloy-steel rust-resisting double-heat-treated nozzle discs. Automatic pressure governor. This car washer is the result of 75 years manufacturing experience, of which 32 years have been devoted to pneumatic engineering.



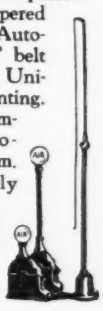
Curtis Compressed Air Washer

Curtis Compressed Air Washer not only washes more cars cleaner than any other power washer, but renders a *complete* cleaning service. Operates cleaning attachments and pneumatic tools, furnishes air for tire inflation, etc. New features are: **Timken** equipped Curtis **duplex compressor;** more compact mounting; reduced weight. Curtis is the only manufacturer building both types of washer, therefore in a position to advise without prejudice.



Curtis Compressor

Curtis Compressor has **Timken** tapered roller bearings. Automobile type "V" belt drive. All Sizes. Universal motor mounting. All-steel base. Improved "Centro-Ring" oiling system. Painted attractively in red and black. Curtis Air Stands —Reel and Tower types with or without water attachments.



St. Louis

Curtis Pneumatic Mchy. Co.,
1965 Kienlen Av., St. Louis—518-X Hudson Term., N. Y.
Please send information about .....
.....
Name.....
Address.....

B3

Fast Express, Dallas and Fort Worth are within three hours of Tulsa; Kansas City is only two and a half hours away. Dallas or Fort Worth may be left at 8:30 in the morning, and, with a change of plane at Tulsa and a few moments to stretch one's legs, the traveler is in St. Louis at a little after three in the afternoon, with still time to make a business call or so, or in time to catch a plane which will put him in Chicago a few hours later. By train the trip from Dallas or Fort Worth to St. Louis takes from late in the afternoon of one day until about noon the next.

For travelers crossing the entire southwest oil country, and particularly those going on to California, even more striking savings in time are possible. A service now being worked out by Erle P. Halliburton, Tulsa, president of the S.A.F.E. lines, will allow the traveler to make his plane connection at St. Louis for Tulsa in the morning.

HE WILL change planes there and go on to Sweetwater, Texas, which he will reach at 4:30 in the afternoon. He will travel by train that night to El Paso. In the morning he will board another plane, arriving at Los Angeles at 3:30 that same afternoon. That puts Los Angeles only two days and two nights from Cleveland, about half the time it can be made by train.

The business man, who will soon start to travel by plane if he is not doing so now, will be surprised by the casual way in which air travel is accepted now. The porter at the hotel will take your order for space on a plane in the same nonchalant manner he now takes your order for a ticket, and lower, by train.

At the airports planes arrive and start by schedule as smoothly as at the union station. Porters hustle bags for passengers. Travelers carefully fold their coats and put them, with their hats, in the overhead rack, then settle themselves in a comfortable chair and feel hopefully in their coat pocket for a cigar, just as when the Congressional Limited pulls out of New York for Washington.

The distance at which planes fly above the ground makes close observation of the landscape impossible.

Towns, instead of being, as from the train, a succession of bill boards, factories, backyards and street crossings, are just a lot of weather beaten roofs. With the succession of planes now flying over some of these towns, it probably will not be long, however, until President Samuel T. McCassity, of the Great American Machine & Foundry Co., will tell the world, from the roof of his factory, not only the name of the town but also the fact that 1,637,923 feet of haywire were manufactured there last year.

Relation of Conservation to Prices

An Open Letter to National Petroleum News From D. E. Montgomery, Dept. of Markets, Wisconsin, and Its Reply by Warren C. Platt, Editor

The Letter

In your issue of May 15th you report a meeting of Oklahoma producers of crude oil on the question of continuing the restrictions in production that have been in effect since February 15th. You say that the Prairie Oil & Gas Company and the Sinclair Oil & Gas Company opposed continuation of the restriction for the reason that it has already caused them to draw on their storage stocks to meet current demand. In your issue of May 22nd you report that the recent increase in the price of crude oil, amounting to about 25c a barrel, was initiated by the Prairie Oil & Gas Company. "Opposition to the price change," your article says, "was shared by a number of companies. The Carter Oil Co., subsidiary of the Standard of New Jersey, was firm in its view that national conditions do not warrant an increase." Is it not a fair conclusion from these facts that the increase in the price of Oklahoma crude oil, followed by increases in other states, was due to the restriction of output by Oklahoma producers with the aid of the Oklahoma corporation commission?

The meeting of producers referred to was held on May 9th. On May 18th the Standard Oil Company (Indiana) increased tank wagon and service station prices one cent throughout its territory. On May 20th the Prairie Oil & Gas Company posted its increased prices of crude oil. On May 22nd Standard of Indiana announced another increase of one cent in the tank wagon and service station prices. Meanwhile refinery prices of gasoline moved up in proportion, so that neither the refiners nor the retailing jobbers are getting any substantial increase out of the higher retail price. Is it not a fair conclusion from these facts that the two-cent increase in the retail price of gasoline was due to the increase in the price of Oklahoma crude oil?

The policy of maintaining stable retail prices followed by the Standard Oil Company (Indiana) for the past two years indicates that a price increase made in the month of May will be maintained through the four following months of high consumption. Gasoline consumption in Wisconsin during these four months (June to September) of 1928 was approximately 153,500,000 gallons. This was 10 per cent above the same four months of 1927. Assuming a 10 per cent increase for 1929 over 1928, the consumption in Wisconsin from June 1 to September 30 will be almost 169,000,000 gallons. The two-cent increase in retail prices on this volume of consumption will cost the consumers of Wisconsin close to $3,400,000. Is it not a fair conclusion from these facts that, if the increased price is maintained throughout the touring season, Wisconsin consumers will have paid approximately $3,400,000 as their share of the national cost of restricting the oil supply?

It appears to be generally accepted, at least in the oil industry, that the restriction of crude oil production is in the public interest because it will conserve the nation's oil resources and will reduce certain wastes incident to the process of production. It is hardly to be questioned that a genuine conservation program is in the public interest. There is a question however, how much we should pay for it in increased prices of petroleum products. If controlled production is to take the place of competitive production, it would seem reasonable that some agency be set up to see that production is not controlled for the sole purpose of increasing prices. And when a majority of oil producers say that a price advance is not necessary, it would seem reasonable that one or two powerful companies be not permitted to force the entire industry into higher price levels.

I address these questions to you because of the interest your paper has always shown in protecting the oil industry from the criticism of outsiders. The retailer will be asked by his customers to explain this two-cent increase in gasoline prices, yet he is not in any way responsible for it and stands to gain very little by it, if anything. If there is justification for these price increases, the public is entitled to know what it is.

Very truly yours,
D. E. Montgomery
Wisconsin Department of Markets
Madison, Wis.

The Reply

Cleveland, Ohio.
May 28th 1929.

My dear Mr. Montgomery:

Yours of the 25th.

Whenever the oil industry or any other industry has a surplus of its commodity or any grade of its commodity, on the market, the price is always down and in the case of the oil business, crude prices, when there has been a surplus, have been generally at an unprofitable level. Obviously therefore, when the surplus ceases to exist, the price goes back up.

All that the oil industry has tried to do through the restrictive effort in Oklahoma and Texas and California, is to hold back the production of this surplus as much as it can, but a surplus has existed up until the last month or two and that surplus, together with the threat of the surplus being larger, in the event that the restriction should be removed too soon, put the price of Oklahoma crude oil at an unprofitable level for the producer owning small wells, and most wells are small wells.

The Prairie Oil & Gas Company specializes on Oklahoma oil and its customers have been demanding more and more Oklahoma oil, whereas on the other hand, the Standard Oil Company of New Jersey, whose subsidiary, The Carter Oil Company, opposed the removal of the Oklahoma restriction, is more interested in West Texas and Venezuela oil than in Oklahoma oil. There is still a surplus of crude oil in West Texas. That oil is not available to all companies nor do all companies want to run it because of its high sulfur content. Right now there is a surplus demand for Oklahoma oil and also a surplus demand for Pennsylvania oil. In the case of Pennsylvania oil the price of crude oil has been advanced 50 per cent in the past year and the refiners of it are having a terrific struggle because they cannot get proportionately more for their products, due to the competitive price level of products from other crudes.

If the industry had not indulged in any restrictive policy in Oklahoma, the same thing would still be happening today, only the surplus of crude oil there probably would have continued longer and probably also have caused a lower price for the crude, to obtain.

A higher price for crude oil will at once start a great deal of new drilling and the industry will not concern itself with restrictive measures again until the industry actually has another huge surplus on its hands. The oil industry is so large and has so many thousands of people interested in it, that it would be impossible to create by agreement or otherwise, any artificial shortage and a manipulation of prices.

There is no more need for a price regulating body on behalf of the public in the oil industry than in any

other business which responds quickly and freely to the operation of the law of supply and demand.

The public of Wisconsin today and elsewhere in this country, is beginning to pay now a reasonable price for the petroleum products it consumes. The past year or so it has been paying an unreasonably low price and has been benefiting from the losses of the individual producer of crude oil.

The conservation ideas which are in the minds of oil men and government officials are more for orderly production of oil than downright restriction. They seek not only to have the oil come from the ground as it is needed by the consumer, but also that the drilling of leases can be conducted in a more intelligent manner so that it will not cost the oil producer so much money, in fact, will not waste so much of the oil producer's money.

So long as conservation is aimed at unnecessary surpluses and unnecessary expense in the handling of leases, the public need never worry about the price being too high.

Very truly yours

Warren C. Platt
Editor

Foreign Opportunities

Reserved information may be obtained from the Bureau of Foreign and Domestic Commerce, Washington, and its district and cooperative offices by duly registered firms and individuals upon written requests by opportunity number. The Bureau does not furnish credit ratings or assume responsibility as to the standing of foreign inquirers; the usual precautions should be taken in all cases, and where no references are offered it does not necessarily imply that satisfactory references could not be given. Correspondence may be in English unless otherwise stated.

38177.—**Gasoline, Kerosene and paraffin wax** Vina del Mar, Chile, agency.

38159.—**Automobile and airplane oils,** Tallinn, Estonia, agency.

38196.—**Asphalt products and axle grease,** Manilla, P. I., agency.

38247.—**Lubricating oils and kerosene,** Colombo, Ceylon, purchase and agency.

38248—**Engine and cylinder oils,** Burslem, England, purchase.

38437.—**Paraffin wax and scale,** Glasgow, Scotland, purchase or agency.

38440.—**Petrolatum,** Quezaltenango, Guatemala, purchase.

38470.—**Paraffin,** Dresden, Germany, agency.

38792.—**Gasoline and other petroleum products,** Berlin, Germany, purchase.

38794.—**Lubricating oil, particularly spindle oil,** Shanghai, China, agency.

The Columbian Steel Tank Company has pioneered the way in the oil transportation industry from the first welded wagon tank to the most modern development of the truck tank. In recent tests in Cleveland, the Columbian *frameless* Semi-trailer, an exclusive Columbian product, demonstrated its payload carrying capacity was nearly 600 pounds greater than drop framed semi-trailers, although the total weight of the Columbian equipped truck tank was about 900 pounds less. This means the company that has pioneered in the business still is pioneering, still is *first*. Columbian history is replete with "firsts," many of which not only are "firsts" but "first and only." Here are a few:

1st and only manufacturer to eliminate tank vibration by *partition mounting*.

1st and only manufacturer to build a *three point supported* tank *integrally welded pipelines*.

1st and only manufacturers to build a *frameless* semi-trailer truck tank unit.

1st and only manufacturer to equip a truck tank with *pressed steel expansion domes*.

1st and only manufacturer to equip a truck tank with *demountable* can racks.

Write us or see the Columbian distributor in your section.

COLUMBIAN STEEL TANK COMPANY
EST'D 1894
TANKS FOR THE WORLD
1405-1625 WEST 12TH STREET KANSAS CITY, MISSOURI

Minnesota Supreme Court Kills Station License Fee

ST. PAUL

THE municipal license fee of $100 a year per filling station with an additional charge of $5 for each vending pump more than one, (recently in force in Minnesota), has been definitely disposed of in Minnesota. The Supreme Court has ruled against it, upholding a permanent injunction granted the Crescent Oil Co., last October by Judge E. A. Montgomery of the Hennepin County court.

The case was styled "Crescent Oil Co. vs. City of Minneapolis," and almost every detail of the progress of the case has been told in NATIONAL PETROLEUM NEWS. When Judge Montgomery granted his permanent injunction in the county court, the victory of the Minneapolis oil men was heralded on page 28 of the issue of Oct. 24, 1928. The oil men were represented in their fight by the Minneapolis law firm of Hadlick & Hadlick, of which Paul Hadlick, secretary of the state oil jobbers' association, is senior partner.

Justice Hilton of the Supreme Court wrote the final decision, Justices Wilson and Holt concurring.

Probably no case has been decided by a state Supreme Court of more importance to the oil jobbers of the United States in recent years. The oil men of Illinois conducted a hard battle against the municipal license fee fad in the summer and fall of 1928 and won a decisive victory. So two states are in a fair way of getting the nuisance eliminated. The Illinois decision was not worth as much to the industry at large as the Minnesota decision, however. The Illinois victory was won on a legal technicality while the Minnesota case was decided on its merits.

With the Minnesota decision, any oil company lawyer now has a perfectly clear precedent to the general effect that $100 a year is entirely too much for a filling station license fee. And there are many in the United States higher than $100. Louisville, Ky., charges $175 a year. The fee in Kansas City, Mo., is $150. Both are flat fees. A sliding scale in Birmingham, Ala., develops a fee close to $300 a year per station there.

Syllabus

A city ordinance requiring a license fee of $100.00 per year to be paid for the operation of a gasoline filling station held, under the facts stated, to be unreasonable and invalid. The business was not of a questionable nature. The license fee was a disguised tax.

Paul Hadlick

HILTON, J. Appeal from a judgment enjoining the city of Minneapolis and certain named officers thereof from enforcing the provisions of an ordinance relating to regulating and licensing gasoline filling stations and wholesale gasoline and oil storage plants.

This case was before this court on a previous occasion, the decision being reported in 175 Minn. 276, 221 N. W. 6. It was an appeal from an order denying a motion for temporary injunction. But two questions were there involved: (1) Whether there was charter authority for the ordinance; (2) Whether the ordinance was valid as a proper regulation in the exercise of the police power or in effect imposed a tax and was therefore invalid.

The decision held that the city council had authority to enact such an ordinance but did not pass upon the second question, being of the opinion that it could better be determined upon a hearing in a regular course of legal procedure rather than upon affidavits presented upon an application for a temporary injunction.

The case was so tried, the trial judge concluding that the license fee imposed under the ordinance was unreasonable, exacted as a tax and for the manifest purpose of creating more revenue for the city and upon the order thus made judgment of permanent injunction was entered from which this appeal is taken.

The ordinance requires a license for the operation of every such filling station located on private property in said city and imposes an annual fee of $100 and an additional $5 for each pump in excess of two. The first ordinance of this nature, approved December 13, 1919, imposed an annual license fee of $25; an amendment, approved June 4, 1921, required the giving of a $5,000 bond by the licensee; a further amendment, approved July 11, 1922, prohibited the filling with gasoline of any tank of a motor vehicle while the engine or motor was running and prohibited smoking in or about such filling stations.

Other minor amendments, not here important, were approved from time to time. An amendment, approved December 4, 1924, raised the license fee from $25 to $30 with $5 additional for each pump more than one and made the license fee $100 for wholesale oil or gasoline storage plants. The ordinance here in question was approved on October 4, 1927 and was a raise of 233 1/3 per cent.

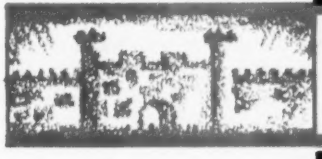
An ordinance, approved January 4, 1928, prohibited placing upon any street, curb or sidewalk any accumulation of snow, ice, rubbish and other dangerous or unwholesome substances by a licensee or other person in charge of or operating a gasoline filling station, and required the keeping of all driveways leading to the station and sidewalks and curbs in front thereof free and clear from all such substances.

THE trial court correctly held, in line with the decision above referred to, that the business of conducting a gasoline filling station was not of a questionable nature and was not apt to become a nuisance; was neither hurtful nor pernicious but of a useful character and a necessity in these days of heavy motor traffic. It was proper to impose a reasonable license fee.

In the previous decision it was stated: "In 1927 the fee was $30 per annum. It was increased to $100 per annum in 1928. Such an exaction savors much of a tax." The trial court in its memorandum states: "It seems to the court from the evidence in this case that the license fee imposed under this ordinance was unreasonable, exacted as a tax, and for the manifest purpose of creating more revenue for the city."

There are, in the city of Minneapolis, in the neighborhood of 500 fill-

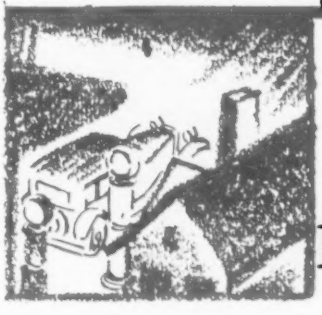
GOOD WILL IS THE BULWARK OF BUSINESS.



INSURE YOURS

Most men spend too much time worrying about competition—and competition gets the business. Others sell extra quality—provide real service—build solid good will—and watch the dollars roll in. Phillips Gasolines and Oils have the *extra quality* that helps a station build good will. They are never permitted to vary from Phillips' exacting standards. And back of them is a large, experienced, modern organization possessing an enviable record of fair dealing with its trade.

Phillips 66



Phillips Petroleum Company

Bartlesville, Oklahoma

2824 Producing Wells; 2122 Tank Cars; 48 Gasoline Plants; over 5000 employees insure a permanent supply of Phillips superior motor fuels. These include Phillips 66, Phillips Benzo Gas, Phillips straight run refinery gasoline 60-62 and Phillips wax free motor oils. The vast experience of the research department of the company is offered jobbers and refiners on any problem of Controlled Volatility.

© Copyright 1929 Phillips Petroleum Co.

NATURAL GASOLINE FOR CONTROLLED VOLATILITY

ing stations and the annual revenue to be derived therefrom would be in excess of $50,000. The court found: "That the actual cost to the city of issuing the said license and enforcing the provisions of said license is about fifty cents each." This finding is criticized.

The city comptroller, called for cross examination under the statute, testified that the total number of all kinds of licenses issued in the city for 1927 was 15,237; that the annual expense for the issuance of such licenses was $8200.57, being the cost of maintaining the license bureau. This includes the salary list and other personal expenses, together with all office supplies, cleaning service, telephone, license plates, insurance, etc., of such bureau, but did not include any part of the cost of the maintenance of other city government activities.

THE finding objected to, as we construe it, is sufficiently supported by the evidence. The trial court undoubtedly intended the fifty cent cost to simply include the actual expense of issuing the license and the words "enforcing the provisions of said license" referred to the minor incidental work entailed in connection with the limited scope of the ordinance. The sum stated was not intended to include other city expenditures that might properly be considered.

The city did not, and undoubtedly could not, except in a very limited way, show any such expense. That there are such expenses of no great magnitude can, however, be taken for granted. Its attempt, however, to include therein the cost of extra police protection because of an occasional crime epidemic in which cash and carry grocery stores and oil filling stations were proving favorite scenes of operation by the bandit class was not proper.

There was no evidence as to extra cost therefor. There is no necessity for police activities in the way of supervision of those engaged in the business or of the business itself. The protecting of such filling stations from sporadic operations of professional or amateur hold-up men does not warrant the charging of the expense thereof to this business.

Police protection is a duty that a city owes to its inhabitants; its cost is paid out of general tax revenues to which proprietors and operators of gas filling stations, as well as all property owners, contribute. It will not do to thus single out this business and tax it in an indirect way.

Starting out with the proposition that the ordinance is presumed to be valid, such licensing being a proper exercise of police power, it was incumbent upon the plaintiff to show that the fee imposed was unreasonable as a license fee and was a disguised tax. We recognize the rule that a municipality may, under a proper exercise of the police power, derive a reasonable, incidental revenue from the issuance of licenses. The power to license is not, however, a power to tax.

A reasonable license fee is not a tax; an unreasonable one is. To be unreasonable here it need not necessarily be confiscatory. When application is made for a license, the proper city officers determine whether the location is proper and designate the manner as to location, construction and installation. After that it does nothing further in the way of inspection except perhaps an occasional observation by some official or employe.

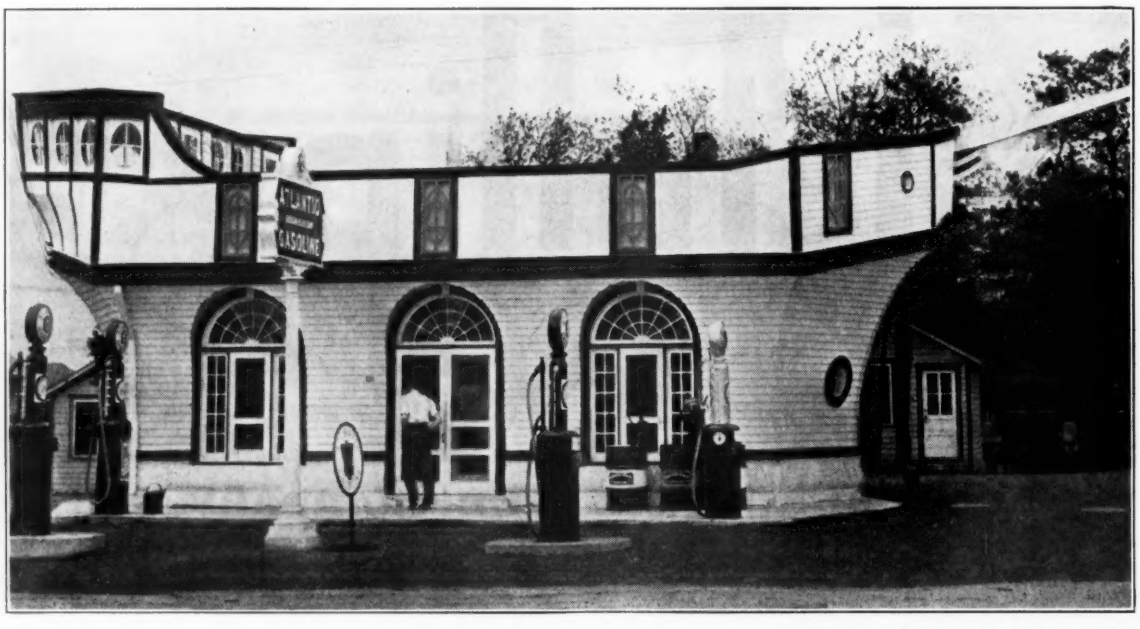
NECESSARY inspection is made by the state which inspects the gasoline as to quality, the dispensing units for accuracy, and the boilers and air compressors for safety. It makes a charge for this service. The state fire marshal also makes periodical inspections. This field is not at all duplicated by the city's activities.

The ordinance with which we are concerned contains no regulatory provisions and no regulation is had. In many of the cases where the question, such as is here involved, was being considered, there was a reduction from time to time of the fee charged, thus showing an intent to keep exactions within proper limits.

Here, the number of filling stations increased from year to year, but the amount of the fee always increased, the last increase being from $30 to $100. The purpose is manifest. State v. Bartles Oil Co., 132 Minn. 138, 153 N. W. 1035.

The findings of the trial court must stand if they have reasonable support in the evidence. We think they

Seashore Gasoline Station Modeled After Ship



—*Underwood & Underwood*

The old and the new in transportation meet here where a model of an ancient ship serves for a modern service station. Note the portholes which serve as windows. It is on the outskirts of Atlantic City

have. A clear distinction is drawn between the amount of a license fee which may lawfully be imposed upon a business which is of a questionable nature and on one which is not. City of St. Paul v. Traeger, 25 Minn. 218; State v. Finch, 78 Minn. 118, 80 N. W. 856; City of Mankato v. Fowler, 32 Minn. 364, 20 N. W. 261; City of Duluth v. Krupp, 46 Minn. 435, 49 N. W. 235; Higgins v. Lacroix, 119 Minn. 145, 137 N. W. 417; 4 Dunnell Minn. Dig. (2 ed.) par 6800 and cases cited.

The business here involved was held not to be questionable in the previous decision. Cases cited by the city that have to do with large fees for the licensing of questionable businesses are not particularly helpful under the situation here. This case must be decided on the facts disclosed by the record.

We have considered the various assignments of error and find no ground for reversal. There is a marked distinction between police protection of an unquestionable business and police supervision of a questionable business. We hold that the findings of the trial court were amply justified by the evidence and its conclusions were correct.

We do not suggest what would be a reasonable fee but do state that the fee of $100 per year with $5 for each additional pump over two is manifestly unreasonable and excessive, and that the ordinance is invalid. Judgment affirmed.

WILSON, C. J., Concurring: I concur in the result, but I think the expense of police supervision is an element for consideration.

HOLT, J., Concurring: I concur in the result, but not in all that is said as to the expense involved in enforcing the ordinances relating to filling stations. I further am of the opinion that the finding: "That the actual cost to the city of issuing said license and enforcing the provisions of said license is about fifty cents each," is without support.

Elected Vice-President Of National Foam

CLEVELAND, June 15.—Frank G. Benedict, insurance engineer for the Sinclair companies, has been elected a vice-president of the National Foam System, Inc. of Philadelphia. Mr. Benedict is well known in our industry as a result of his work in the interests of safety and fire prevention.

About July 1, Mr. Benedict will move to Tulsa. He will open offices there for the National Foam System.

Production in Turner Valley, Alta., in December was 47,505 barrels, a new record.

Of Course We Guarantee
VITALIC
REG U.S. PAT OFFICE
Gasoline-Pump Hose

¶ If you have a length of Vitalic Gasoline Hose that has been injured through some accident or through carelessness, so that it cannot give you the service that is *actually built into it,- NOTE THE DATE ON THE BAND* and return the hose to the factory before the 1000 Day Guarantee is up and we'll make it good.

¶ We want you to get *Full Measure of Service* from Vitalic Gasoline Hose.

BRANCHES

BALTIMORE, MD.	DETROIT, MICH.
BOSTON, MASS.	MILWAUKEE, WIS.
BUFFALO, N. Y.	NEW YORK, N. Y.
CHICAGO, ILL.	PHILADELPHIA, PA.
CLEVELAND, O.	PITTSBURGH, PA.
DAYTON, O.	ST. LOUIS, MO.

TOLEDO, OHIO

Continental Rubber Works,
Erie, Pa. U.S.A.
Post Office Drawer O

Rule Against Secret Violation Of Ethics Code Is Rescinded

CLEVELAND, June 15

THE Federal Trade Commission has rescinded the "clandestine" trade practice rule it adopted last October. This rule was:

"That the clandestine violation of any of said resolutions, those accepted by the Federal Trade Commission merely as expressions of the industry as well as those approved by said commission, shall be deemed unfair methods of competition."

Edgar A. McCulloch, chairman of the commission, opposed rescinding the rule.

The resolutions referred to constitute Group II of the code of ethics drafted by industries and approved by the commission. The "clandestine" rule was adopted originally in regard to the cottonseed mill industry but later it was generally adopted to apply to all codes of ethics approved by the commission.

Chairman McCulloch in a memorandum opposing repudiation of the rule said in part:

"A definition of the term 'unfair methods of competition' stated by the Supreme Court in the Gratz case (253 U. S. 421) and the only one stated by that court is as follows:

" 'They are clearly inapplicable to practices never heretofore regarded as opposed to good morals because characterized by deception, bad faith, fraud or oppression, or as against public policy because of their dangerous tendency to hinder competition or create monopoly.'

"Stated conversely this definition means that practices 'characterized by deception, bad faith, fraud or oppression' have been 'heretofore regarded as opposed to good morals'—and do constitute 'unfair methods of competition.'

"Secret violation of a lawful compact between competitors in trade would clearly seem to constitute 'deception, fraud and bad faith' and to be 'opposed to good morals.' And it may also result in 'tendency to hinder competition.'

"It has been suggested in some quarters that secret violation of a compact is 'not good morals,' and yet it 'is not opposed to good morals.' The writer hereof is unconvinced that the distinction thus stated is sound, for a practice which is not within the realm of good morals is 'opposed to good morals.'

"He that is not *for* good morals is *against* good morals. It may fairly be assumed that the Supreme Court used the words 'good morals,' not in a technical, but in a popular sense for the general conception of good morals must be and is the true test. Morality has been defined to be conformity or nonconformity to accepted rules of right—and the courts can find no safer guide than that definition. . . .

"No fear need be entertained that the commission, by the declaration of policy in advance, will have denied to the offender a fair trial upon the facts of his particular case. The writer is of the opinion that the commission's policy of preventing secret violations of trade conference rules is not invalid and that it should not be abandoned. Notwithstanding the difficulties which may arise in enforcing the policy, it is not without value to industries in which there is a desire to establish, through conference rules, sound business practices and to eliminate unwholesome ones. The policy is at least an adventure which can, if pursued, result in no harm to business interests, and on the contrary might be helpful."

Outline for Rate Basis Presented Carriers

Staff Special
TULSA

AN OUTLINE of the Interstate Commerce Commission examiners' ideas of a proper basis of rates, based on evidence submitted thus far in the Southwestern Freight Rate Case, was given shippers and carriers by Examiner Burton Fuller following a rebuttal hearing in Tulsa May 23.

The examiners' ideas were given with the understanding that they were furnished only as a basis for the various parties to the proceedings to "shoot at" in their briefs which must be filed with the Commission by Sept. 1, 1929. Even though Examiner Fuller stressed the point that the basis he outlined was for that purpose only, it was considered rather unusual for examiners to have prepared their ideas so quickly on the heels of the final hearing in the case.

Examiner Fuller's idea of a proper basis of rates within southwestern territory and within and to the Mississippi Valley would be in effect a reduction of Texas rates on petroleum products and an increase in rates in other southwestern states.

The examiners' proposal ranges roughly from 2 to 5 cents a hundred pounds higher than the proposed southwestern scale. It ranges roughly from 1 to 7 cents higher than the Driscoll scale proposed by Oklahoma shippers, the difference being based on the distance. The proposal follows comparatively closely the proposal of the carriers for the first 30 to 50 miles, but draws sharply away from their proposal as the distance is increased.

Oklahoma shippers' proposal, for instance, carries a rate of 14.5 cents per 100 pounds for a haul of 100 miles, while the examiner's proposal lists a rate of 21 cents. For a 300-mile haul the Oklahoma proposal is 24 cents, as compared with 29 cents by the examiner. For a distance of 600 miles the Oklahoma proposal is 38 cents, and the examiner's 39 cents.

The examiner's basis ranges from 10 cents for 5 miles up to 48 cents for 1000 miles, the table scale allowing 1 cent for each break.

Examiner Fuller said the proposed rates and rate bases were suggested as maximum reasonable rates but, in order to avoid undue prejudice, it was expected the carriers would maintain these rates and bases except upon application to and approval of the I.C.C. or appropriate state commission on the showing that special circumstances such as truck or water competition required lower rates.

Parties to the case were requested to consider in their briefs whether, in view of the different transportation and competitive conditions of lubricating oil as compared with gasoline and other petroleum products, a scale with a fixed relationship to First Class (about 25 per cent) should not be prescribed on lubricating oil.

The request was also made that parties consider whether the Commission should issue an order under Sec. 3 requiring carriers to take increases prescribed to St. Louis and Kansas City in Mid-Continent Oil Rates, 1925.

Examiner Fuller said he and Examiner Peyser were of the opinion that possibly the present differential line in Texas should be moved westward. Several railroads in southwest Texas particularly, which have heretofore had differentials due to the comparatively light traffic, have been flourishing since oil was discovered in that region and requests have been made to the I.C.C. to consider taking off those differentials.

TRIPLEXD
GASOLINE PUMP HOSE

A first-class service station, with a snappy crew to deliver the gas, needs Triplexd Gasoline Pump Hose to complete the picture . . . (Look 'em over—you'll find most of 'em have it.)

Triplexd Pump Hose contributes its share to your profit—it stays on the job longer—and it carries disability and accident insurance for 1000 days.

METAL HOSE & TUBING CO.
INCORPORATED
236 TILLARY STREET
BROOKLYN, N.Y.

ST. LOUIS SAN FRANCISCO LOS ANGELES

"I Could Lose My Customers $1,000 Per

SALES 6.6 GALLONS EACH MONTH PER DOLLAR INVESTED

ATLANTA, Ga.

"PROFITABLE operation would be an easy matter with me if I were situated so I could get rid of about two-thirds of my customers and do it gracefully," a southern jobber told a visitor in his office a few days ago. And as he said so he pulled a neatly arranged stack of papers from his desk, fastened in a pasteboard folder.

"There is too much of that report for you to read and study here, but I will tell you the high points in it and show you the 're-cap' which is the whole story. The rest of the papers are only substantiating data for the main argument; that is, that we would be making considerably more money with only one-third of our present customers.

"During the last four months of 1928 we had 131 retail outlets. Eight of them belong to us and are rented out to dealers. One of the eight is a side-track station with bulk storage and is supplied direct from tank car but it is close to another bulk station and would be profitable to operate even if it were served by tank truck. It does the biggest volume of all the stations we have.

"The lots on which the eight owned stations stand are actually owned by us in some cases, and in other cases held on long-term lease. But the rent we get for the stations offsets the lease expense at all leased locations, and the rent derived from the owned stations pays interest on investment. In short, each of the eight is a 'Class A' outlet.

"All the rest of the dealers, large and small, pay us the regular tank wagon price for our gasoline but we have supplied them with a certain amount of equipment—some more and some less. In several cases we have given them a great deal more than they deserve in consideration of the business they do. That is how we got started figuring on a new proposition.

"For lack of a better basis of figuring, we made a great many interesting calculations during January, 1929, based on the volume of business done during the last four months of 1928. The first important discovery was that 56 of our outlets (slightly more than a third of them) did more than two-thirds of the business, each successive month.

"Pursuing the matter further we looked up the item of equipment cost at each of the 131 stations and compared it with the monthly gallonage. It was a peculiar calculation, but we determined how many gallons of gasoline each station moved each month, per dollar invested in equipment. Each station figured a different result, of course, but this calculation made it easy to classify the outlets in three groups, good, fair and poor.

"The result showed that our own eight stations averaged 6.6 gallons of gasoline a month per dollar invested in equipment. We considered that good return. Then there were 48 dealers who averaged 4.3 gallons a month per dollar invested in equipment, and we called that fair. But the remaining 75 stations averaged only 1.4 gallons a month per dollar invested in equipment. That is poor.

"By consulting our records of bills receivable, it developed that all the doubtful and bad accounts are among the 75 stations where investment in equipment is high and gallonage low. In fact I am sure I can get all the 56 better stations on a cash basis by exerting a little effort in that direction.

"By this time the study had become so interesting, investigating nothing except what could be learned inside the office, we decided to go outside. We located our customers on a road map, designating the three kinds with tacks of three different colors, and it was obvious that the 75 'third class' dealers were the hardest ones to serve. Nearly three-fourths of our truck mileage was spent in serving the least profitable two-thirds of the buyers.

"At that time we were running four tank trucks to deliver 108,000 gallons a month to 130 locations (not counting the side track station). I figured we could serve our own eight stations and 48 'medium class' dealers with two tank trucks and two drivers, having a stake truck in reserve with no extra driver. Every gallon would be profitable then, and we could enjoy the following savings:

"With all customers on a cash basis, the one man at the warehouse would be a combination bookkeeper and clerk, with the help of the men of the trucks. Thus we could eliminate the salary of an assistant manager at $200 a month; an assistant bookkeeper at $150; a clerk in the plant office at $100; two truck drivers jointly drawing $230, and depreciation on two tank trucks, conservatively $200.

"As the active head of my own business, I spend a great deal of time worrying with irritating accounts. It is wasted time. I could put all that time on sales and make it profitable. Surely I could earn

Two-Thirds of and Make Month More"

By Ward K. Halbert
N. P. N. STAFF WRITER

$120 a month for the company that way, for there was a time when I made pretty good money selling. If I might call my saved time worth $120 a month, it would mean that I could save the company $1000 a month by pruning off one-third the gallonage.

"Certainly we could not begin immediately to realize that whole $1000 a month in cash. It would have to come gradually as the economies were put into effect. However, a great deal of the saving would be realized almost immediately. We could realize at once on some economies not mentioned yet, such as maintenance and replacement of the equipment now in the hands of the 75 'third class' customers.

"A good share of this outstanding equipment has some salvage value. Much of it consists of kerosene tanks at rural stores which could be used to advantage. It is marketable or it might be placed with dealers not so far away; dealers with good credit who could be served in transit without driving extra mileage. I believe it would salvage over 60 per cent.

"It is hard for any oil man to say specifically which gallon is profitable and which is not. But, at least, I have picked out the gallonage that moves at greatest cost and segregated it. I have identified it with colored tacks on a map. Moreover, I have evidence sufficient to convince me that I can discard approximately 60 per cent of my customers who handle less than one-third of the volume and, by doing so, save the company $1000 a month.

"Expenditures saved represent net earnings. I do not know of an easier way to earn $1000 a month net. I will admit frankly that the company is not now earning $3000 a month net. So it ought to be good business to save $1000 by eliminating one-third of our operation. I feel sure if all our customers were like the 75 I want to discard, we would be out of the competition pretty shortly."

After looking through the figures for a while the visitor inquired, "Would you mind telling me why you have not carried out the recommendations of this report? Have your business associates passed on it?" And the answer came slowly:

"I have only one business associate who has anything much to say about the matter. He is heavily interested in the business. He is also heavily interested in a refinery. I buy my gasoline from that refinery. This third of my volume that is unprofitable to me is profitable to the refinery. My associate will not agree to making the experiment. Do you ever take a drink?"

National Cantube Co., Inc., 1330 N. Halsted St., Chicago, manufacturer of Cantube containers for filling pressure grease guns, reports a good bit of salesmanship at a Boston service station recently where Cantube containers of grease were on display. A motorist, who later turned out to be an official of a large floor wax manufacturer in the East, drove into the station recently and became interested in an attractive package of pressure gun grease. Upon inquiring about it, he was told how the package was filled and sealed, and how the grease was dispensed.

This manufacturer of floor wax and floor-waxing machines had been for a long time trying to solve the problem of keeping the purchaser of a machine using the company's wax. A Cantube package was finally developed to fit this particular need so that a user of this machine now must ask for the manufacturer's brand of wax only which comes in Cantube.

Crouse-Hinds Co., Syracuse, N. Y., has published bulletin 2127 devoted exclusively to gasoline service station lighting. It includes descriptions of white or colored lighting and tells of the floodlighting intensity to use on stations for the best effects. Reflectors, lamps, mountings, etc., are described.

Otto Bieber, 5 Columbus Circle, New York, has developed what he calls an Autotab—a reminder to the motorist when his car is due for oiling and greasing work again. It is a small glass panel in a metal frame, the surface of which has been treated so the date and speedometer reading can be written in pencil or fountain pen and then erased neatly when new figures must be put in. There is space for recording the date when the crankcase was drained, chassis greased, battery serviced, etc.

The Pittsburgh office of The Brown Instrument Co. has moved to 1522 Oliver Building. While the former office was also located in the Oliver Building, the new quarters offer increased facilities for handling business.

MODEL 200

In Home Garages EVERYWHERE

This new Model 200 has popularized the "continuous use oil test" in countless home garages—selling more oil, winning more friends and making new, steady customers for lube-oil marketers.

Replaces Leaky Faucets

Model 200 dispenses oil from the drum in an upright position, in a strong, unbroken stream and cuts off oil flow cleanly. No more fuss with leaky faucets. No more waste oil.

All Metal---Fits All Drum Depths and Various Size Openings

Model 200 is all-metal and so well built that it is capable of handling kerosene, gasoline, alcohol, etc., as well as motor oils. It fits 1½-inch to 2-inch drum openings and has adjustable sliding intake for draining 15 to 16 gallon capacity drums. Handle is malleable and arranged for locking. Heavy one-piece construction, and heavy cast head.

Write for Sales Plans and Bulletins!

Bennett Pumps Corp., Muskegon, Mich.; Service Station Equipment Co., Toronto and Winnipeg; Republic Steel Package Co., Richmond, Calif.; Bennett Export Corp., 32 Broadway, New York.

Bennett Pumps Corporation
QUALITY BUILT
Bennett
Dispensing Equipment
FOR OIL MARKETERS
Muskegon, Michigan

Changes in Oiling, Greasing and Fueling Systems of New Models

HERE is a means by which even minor changes in lubrication and fuel systems of new models of automobiles may be quickly made known to the men in your lubrication stations.

John Younger, head of the industrial engineering department of Ohio State University, and editor of Automotive Abstracts, will tell NATIONAL PETROLEUM NEWS *readers what the changes are in both engine and chassis lubrication, and in fuel systems, in new models, as they are brought out.*

His articles appear irregularly closely following the announcement of new models by the automobile companies.

THE Buick Motor Car Company has announced a new car—the Marquette—in a price range of $965 to $1,035. The engine is L-head of 212.8 cubic inches piston displacement. There is nothing either in the appearance or in the design of the car that can properly be classed as radical.

The engine, as previously announced, is an L-head type with four-bearing counter-weighted crankshaft, cast iron pistons, pressure lubrication and a compression ratio of 5.2 to 1. Steel-backed bearings support the crankshaft, the four bearings being stepped up in diameter from front to rear, and the shaft itself provided

Add This to Your "Capacity Chart"

HERE are the capacity figures for the new Marquette car, made by Buick, for insertion in the "Passenger Car Capacity Chart" published by NATIONAL PETROLEUM NEWS:

Cooling system	12 quarts
Gasoline tank	16 gallons
Crankcase (refill)	6 quarts
Transmission housing	3 pints
Differential housing	3 pints
S. A. E. viscosity recommendation	30 summer
S. A. E. viscosity recommendation	20 winter

The oil fill-pipe is on the left-hand side of the motor. The Zerk or push type high pressure lubrication fittings are on the chassis.

The NATIONAL PETROLEUM NEWS "Passenger Car Capacity Chart" contains the capacities of all cars in general use and all models that had been developed at the time of this year's National Automobile Show.

The charts are printed on four-ply white cardboard with green border and are 12 x 21 inches. The chart covers the cars of the last four years, except discontinued makes. Old models of manufacturers still in business are covered. Capacities shown are the cooling system, gasoline tank, crankcase, transmission and differential housings, manufacturers' S. A. E. viscosity recommendations if there are official recommendations, and the location of the crankcase fill-pipe.

Prices of the charts are:

	Per Copy
Single copy	25 cents
Lots of 10 copies	20 cents
Lots of 25 copies	18 cents
Lots of 50 copies	15 cents
Lots of 100 copies	12 cents
Lots of 500 copies	10 cents
Lots of 1000 copies	9 cents

If the buyer wishes his imprint on charts or special color, special quotation will be supplied by writing NATIONAL PETROLEUM NEWS, 1213 W. 3rd St., Cleveland.

with four counterweights to reduce bearing loads.

Connecting rods have the pins secured in the upper end, and are provided with a bleed hole in the lower end for spray lubrication of pins and cylinder walls. Drive for the AC fuel pump is by means of a cam on the rear of the camshaft, and an integral gear drives the vertical accessories shaft, with the distributor at the upper and the oil pump at the lower end, well down in the sump.

Lubrication is by pressure to crank and camshaft main bearings, crankpins and timing chain. Double protection against contamination of the oil is provided by an AC oil filter and a crankcase ventilating system.

The inlet for the ventilation system is formed by the crankcase breather located at the front of the engine on the left. The opening of the breather faces the draft from the fan, the air passing through steel wool in the inlet. The outlet is through a pipe secured to the rear valve cover plate and extending below the crankpan.

Thermostatic control is provided for the cooling system. The water pump itself is in the front of the block, driven in unit with the fan through the same V-belt which drives the generator. The belt is adjusted by swinging the generator.

The carburetor is a Marvel, with thermostatic heat control for the manifold. The manifold valve can be adjusted also by hand in three positions, for seasonal temperature variations. The inlet manifold itself has a slight downdraft.

An air cleaner is provided at the carburetor intake. Electrical units are all of Delco-Remy manufacture. The distributor is semi-automatic, and the entire spark control range can be quickly advanced or retarded.

No Rate Boost to Follow O'Fallon Decision

WASHINGTON, June 14.—The bulk of judgment of informed men, in Washington, is that the Supreme Court's decision in the St. Louis & O'Fallon railroad valuation case will not cause any increase in freight rates on petroleum and its products or any other commodities.

"I am confident there will be no increase in railway rates as a result of the O'Fallon decision," said President Hoover the day after the court handed down its views.

W. G. Brantley, former member of Congress from Georgia, leading counsel of the railroads in valuation matters, pointed out that making a valuation of the property of a railroad is one thing and making rates is another, the latter involving consideration of the value of the service a railroad performs for a shipper, regardless of how much the railroad has paid for the property it uses.

In the O'Fallon case the question was as to whether the Interstate Commerce Commission had followed the law, as laid down by the courts, in making a valuation of that little railroad's property. A valuation was needed because the nine-mile railroad is a great earner. Under the law half of all earnings in excess of 6 per cent, goes to the United States as trustee for railroads not able to make a fair return, so that, from that fund the government can help them.

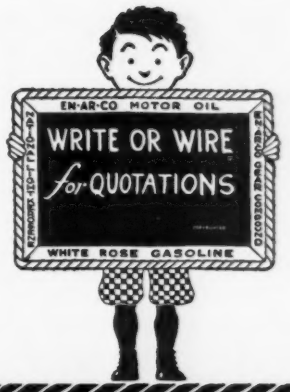
The rate body adopted a formula for making the valuation which left out of consideration what it would cost, at present prices, to construct the O'Fallon road. The court said that was not a compliance with the mandate of Congress directing the Commission to make a valuation in accordance with the "laws of the land." Now that body will have to go over its work again and show the courts some evidence that it has given thought to present cost of reproduction as a factor in the valuation.

The railroad contention made in this case was that present cost of reproduction should be given almost dominant weight. The court did not agree with them. It merely said that the law of the land required that some weight be given to the reproduction cost. How much, the court said, was not a question before it.

Undue prominence was given to the case, it is believed, by some of the members of the Interstate Commerce Commission who are not lawyers. One lawyer member, however, was quoted as saying that it was the greatest law case in history. So-called progressive or radical thinkers suggested that, if the theory of reproduction cost were used, the railroads would be valued at $33,000,000,000 or even more billions, instead of about $24,000,000,000. Then they jumped to the conclusion that rates would have to be increased in the same ratio.

Mr. Brantley pointed out that even if rates were made on a $33,000,000,000 basis, an increase of only 6.81 per cent in gross revenue would be needed to assure the railroads a fair return on their investment. But he said that the primary desire of railroads was for freight to haul and that making a general increase in rates would result merely in depriving the railroads of some of the revenue they were now receiving.

It is not certain that the valuations will be increased to as much as $33,000,000,000 by a sensible use of the reproduction rule. The O'Fallon and other railroads fought the valuation, not so they might increase their rates but so that they might not be required to surrender so large a share of their excess earnings.



En-ar-co
MOTOR OIL
White Rose
GASOLINE

YOU will make money if you handle these nationally advertised brands.

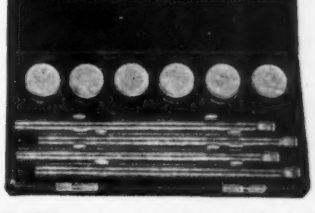
All grades of lubricating oils and greases.

The National Refining Co.
Cleveland, Ohio

Pocket Sample Cases

#168
Pocket Case
only $4.00

Sturdily constructed from black cobra grain cowhide. Lined with red plush. Contains six bottles. 9"x3½".



175—This case contains eight 9-inch bottles and six grease jars. Made from black cobra grain cowhide, lined with red plush. Has two serviceable nickel slide catches, price including metal capped corks, only $7.00

Less 10% for Cash

Other styles in our FREE Catalog

L-U-C-E

Builders of Sales Luggage

614 Delaware Kansas City, Mo.

Discerning Jobbers see a CHAMPLIN TRADE MARK *in the Harvest Moon!*

The harvest moon, to a discerning jobber, spells "CHAMPLIN." For at harvest time CHAMPLIN Tractor Oils and Kerosenes stand foremost in the minds of a host of farmers as products calculated to keep farm machinery going at full capacity, day and night. Champlin has for years conducted a consistent farm journal advertising campaign, and the farming sections of the prosperous Middle West absorb four-fifths of the Champlin refinery output.

CHAMPLIN Tractor Oils are refined from a special paraffin-base crude whose lubricating content is noted for its viscosity and stamina. Oils made from this crude can be depended on to hold their body and deliver an exceptional period of service.

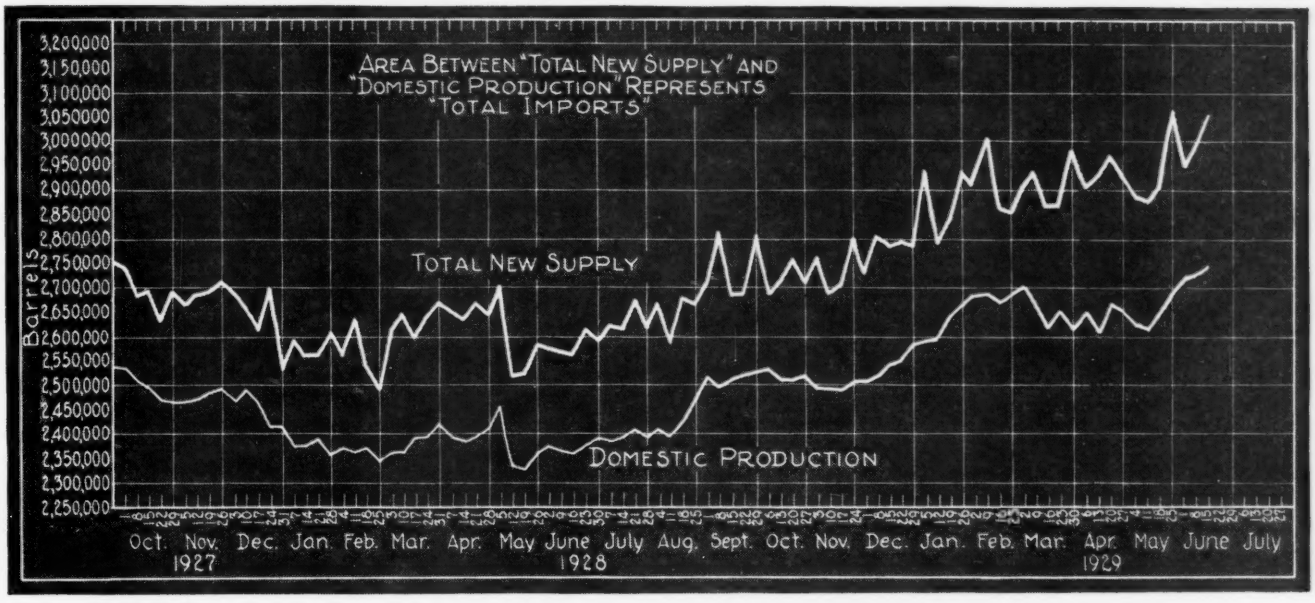
CHAMPLIN Kerosenes exceed government specifications for quality and are clean-burning and sweet smelling for home use, and powerful as motor fuels.

CHAMPLIN Presto Gasoline is a powerful anti-knock motor fuel, and especially fine for summer use.

For quotations phone, wire or write The Champlin Refining Company, Enid, Oklahoma.

CHAMPLIN

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	June 15	June 8
Production east of Rockies	1,927,950	1,928,950
Decrease		1.000
Total production in U. S.	2,743,250	2,724,450
Increase		18,800
Crude oil imports	322,571	273,286
Increase		48,285
Total crude supply	3,065,821	2,997·736
Increase		68.085

OKLAHOMA

	June 15	June 8
Allen Dome	23,050	24,300
Blackwell	3,850	3,900
Bowlegs	35,000	36,050
Braman	3,800	3,700
Bristow-Slick	19,300	19,350
Burbank	19,850	20,150
Cromwell	8,100	8,150
Cushing	19,200	19,250
Davenport	1,450	1,500
Duncan District	6,750	6,700
Earlsboro	59,900	59,400
Fox	1,400	1,400
Garber	5,800	5,750
Graham	4,200	4,250
Healdton	12,800	12,850
Hewitt	12,800	12,850
Hubbard	1,850	1,850
Little River	76,650	77,350
Logan County	15,600	15,600
Maud	26,800	27,700
Mission	38,050	41,250
North Okmulgee	13,000	13,100
Oklahoma City	2,500	2,600
Osage (outside Burbank)	25,600	25,700
Papoose	3,300	3,300
Pearson	1,500	1,550
St. Louis	87,200	88,200
Scholem-Alechem	12,900	13,000
Searight	12,050	12,800
Seminole	34,800	35,600
South Okmulgee	7,700	7,800
Thomas	900	900
Tonkawa	10,050	10,200
Wewoka	4,800	4,800
Yale-Jennings	6,800	6,850
Others	60,000	58,050
Total, Oklahoma	674,700	683,050
Decrease		8,350

KANSAS

Augusta-Fox Bush	2,950	3,000
Churchill	6,500	6,300
Eldorado-Towanda	12,950	12,900
Florence-Covert	950	950
Greenwood County	21,050	21,300
Oxford	4,450	4,650
Peabody-Elbing	2,700	2,750
Rainbow Bend	1,050	1,050
Russell	3,350	3,400
Sedgwick County	35,050	32,800
Others	29,800	30,000
Total, Kansas	120,800	119,100
Increase		1,700

NORTH LOUISIANA

Bellevue	600	600
Caddo, light	9,850	8,100
Caddo, heavy	3,100	3,200
Cotton Valley	2,800	2,750
De Soto and Red River	3,900	3,900
Elm Grove	650	600
Haynesville	5,200	5,250
Homer	3,950	4,000
Pleasant Hill	450	450
Urania	6,000	5,800
Others	250	250
Total, North Louisiana	36,750	34,900
Increase		1,850

ARKANSAS

Champagnolle	7,350	8,000
El Dorado	4,600	4,650
Lisbon	1,350	1,350
Nevada	950	1,050
Smackover, light	6,050	6,050
Smackover, heavy	48,550	48,700
Stephens	1,000	1,000
Others	100	100
Total, Arkansas	69,950	70,900
Decrease		950

TEXAS (OUTSIDE GULF COAST)

Panhandle District

Carson County	7,300	6,800
Gray County	50,750	51,400
Hutchinson County	26,100	28,100
Wheeler County	900	1,000
Others	1,400	1,800
Total, Panhandle Texas	86,450	89,100
Decrease		2,650

North Texas

Archer County	17,150	17,000
Burkburnett	9,050	9,000
Electra	12,100	12,250
Iowa Park and K. M. A.	5,050	5,200
Montague-Cooke	12,600	12,700
Wilbarger	26,750	26,850
Others	600	600
Total, North Texas	83,300	83,600
Decrease		300

West Central Texas

Brown County	7,550	7,600
Callahan County	3,950	3,800
Coleman County	3,800	3,900
Eastland-Desdemona	6,500	6,450
Jack County	2,650	2,500
Palo Pinto County	400	350
Shackelford County	11,750	13,000
Stephens County	6,300	6,400
Throckmorton County	600	600
Young County	6,900	6,800
Others	600	650
Total, West Central Texas	51,000	52,050
Decrease		1,050

West Texas

	June 15	June 8
Crane and Upton Counties	47,000	46,900
Crockett County	2,100	2,100
Howard County	43,750	44,950
Jones County	3,750	4,100
Mitchell and Scurry Counties	2,700	2,700
Pecos County	104,900	102,100
Reagan County	18,100	18,350
Winkler County	143,700	143,100
Others	1,800	1,800
Total, West Texas	367,800	366,100
Increase		1,700

East Central Texas

Boggy Creek	2,800	2,700
Corsicana-Powell	7,950	8,100
Currie	400	400
Mexia	5,850	5,950
Nigger Creek	500	600
Richland	400	400
Wortham	1,100	1,150
Total, East Central Texas	19,000	19,300
Decrease		300

Southwest Texas

Dale	500	550
Laredo District	11,000	11,200
Luling	11,900	11,750
Lytton Springs	900	950
Salt Flat	50,200	48,400
Somerset	1,850	1,800
Others	4,050	3,900
Total, Southwest Texas	80,500	78,550
Increase		1,950
Total, Texas (Outside Gulf Coast)	688,050	688,700
Decrease		650

GULF COAST

Coastal Texas

Barbers Hill	8,300	9,200
Batson	1,400	1,400
Big Creek	2,050	1,800
Blue Ridge	3,550	3,750
Boling	1,700	1,700
Damon Mound	600	700
Goose Creek	5,900	5,800
Hull	9,500	10,000
Humble	5,900	6,300
Orange County	2,900	2,800
Pierce Junction	18,800	17,100
Racoon Bend	5,950	5,300
Saratoga	900	900
Somerville	2,700	2,700
Sour Lake	2,750	2,700
South Liberty	5,500	5,600
Spindletop	25,750	27,100
Sugarland	11,150	11,200
West Columbia	6,350	6,100
Others	3,800	3,650
Total, Coastal Texas	125,450	125,800
Decrease		350

Coastal Louisiana

East Hackberry	2,200	2,300
Edgerly	700	700
Evangeline	3,350	3,300
Lockport	4,100	4,000
Old Hackberry	2,500	2,650
Sorrento Dome	250	250
Sulphur Dome	2,200	2,000
Sweet Lake	500	300
Vinton	5,000	3,800
Others	1,050	1,600
Total, Coastal Louisiana	21,850	20,900
Increase		950
Total Gulf Coast	147,300	146,700
Increase		600

ROCKY MOUNTAIN

Wyoming

	June 15	June 8
Big Muddy	2,250	2,250
Elk Basin	750	850
Grass Creek	2,350	2,200
Labarge	1,750	1,750
Lance Creek	250	300
Lost Soldier	3,300	3,100
Oregon Basin	4,100	3,800
Rock Creek	2,250	2,400
Salt Creek	31,050	27,050
Others	4,000	3,700
Total, Wyoming	52,050	47,400
Increase		4,650

Montana

	June 15	June 8
Cat Creek	1,400	1,450
Pondera	3,150	3,300
Sunburst	6,850	6,850
Others	100	100
Total, Montana	11,500	11,700
Decrease		200

Colorado

Florence	950	1,000
Fort Collins	2,500	2,450
Moffat (Craig)	1,650	1,700
Others	2,600	2,550
Total, Colorado	7,700	7,700

New Mexico

Artesia	900	900
Hogback	200	250
Rattlesnake	1,150	1,100
Others	400	400
Total, New Mexico	2,650	2,650
Total, Rocky Mountain	73,900	69,450
Increase		4,450

CALIFORNIA

Dominguez	10,000	9,300
Elwood-Goleta	26,600	27,000
Huntington Beach	42,500	40,500
Inglewood	22,500	22,000
Kettleman Hills	3,400	3,400
Long Beach	175,000	173,000
Midway-Sunset	64,000	64,000
Rosecrans	5,300	5,300
Santa Fe Springs	222,500	216,000
Seal Beach	44,000	41,000
Torrance	18,500	13,000
Ventura Avenue	62,500	57,500
Others	123,500	123,500
Total, California	815,300	795,500
Increase		19,800

EASTERN

(Including Ill., Ind., Ky., Ohio, W. Va., Pa. and N. Y.)	116,500	116,150
Increase		350

Compilation Of Mid-Continent Refinery Operations

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National Petroleum News

Mid-Continent Refinery Operations Week Ended June 14 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended June 14
Plants Reporting	12	29	25	15	12	93
Da. Av. Cap. (Bbls.)	92,000	160,200	86,600	81,500	54,900	475,200
Da. Cracking Capacity	30,700	52,600	17,200	.....	22,700	123,200
Da. Av. Crude Runs	60,519 — 15.8	112,632 — 6.1	64,551 + 1.2	51,182 + 0.9	70,979 + 22.8	359,863 — 1.2
Da. Av. Other Oils	7,718 + 12.5	4,903 — 42.4	1,670 +211.6	1,084 + 3.2	545 — 73.2	15,920 — 16.2
GASOLINE—Gallons						
Stocks, June 7	32,218,000	71,935,000	17,688,000	8,319,000	10,912,000	141,072,000
Prod. 6-7 to 6-14	9,863,000 — 8.5	18,624,000 — 6.2	8,355,000 + 3.6	4,278,000 — 4.6	6,901,000 + 20.7	48,021,000 — 1.8
Ship. 6-7 to 6-14	10,791,000 + 4.5	17,214,000 — 4.0	8,939,000 + 26.7	6,325,000 + 34.0	6,764,000 — 2.3	50,033,000 + 6.5
Stocks, June 14	31,290,000 — 2.9	73,345,000 + 2.0	17,104,000 — 3.3	6,272,000 — 24.6	11,049,000 + 1.3	139,060,000 — 1.4
Ratio Sales to Prod.	109.4%	92.4%	107.0%	147.8%	98.0%	104.2%
KEROSENE—Gallons						
Stocks, June 7	7,780,000	6,531,000	2,603,000	78,000	485,000	17,477,000
Prod. 6-7 to 6-14	1,878,000 — 29.1	2,174,000 — 6.1	1,477,000 + 0.2	50,000 +400.0	893,000 +257.2	6,472,000 — 3.4
Ship. 6-7 to 6-14	2,057,000 — 19.3	2,653,000 — 4.2	1,704,000 + 12.1	72,000 +554.5	398,000 + 98.0	6,884,000 — 2.3
Stocks, June 14	7,601,000 — 2.3	6,052,000 — 7.3	2,376,000 — 8.7	56,000 — 28.2	980,000 +102.1	17,065,000 — 2.4
Ratio Sales to Prod.	109.5%	122.0%	113.8%	144.0%	44.6%	106.4%
STOVE DISTILLATE—Gallons						
Stocks, June 7	1,820,000	3,031,000	393,000	87,000	59,000	5,390,000
Prod. 6-7 to 6-14	69,000 — 81.0	992,000 + 95.3	185,000 + 17.8	65,000 +116.7	54,000 + 58.8	1,365,000 + 24.9
Ship. 6-7 to 6-14	502,000 —360.6	100,000 — 90.2	168,000 + 57.0	79,000 — 24.0	55,000 + 22.2	904,000 — 34.8
Stocks, June 14	1,387,000 — 23.8	3,923,000 + 29.4	410,000 + 4.3	73,000 — 16.1	58,000 — 1.7	5,851,000 + 8.6
Ratio Sales to Prod.	72.8%	10.1%	90.8%	121.5%	101.9%	66.2%
GAS OIL—Gallons						
Stocks, June 7	11,467,000	25,032,000	3,286,000	17,675,000	7,298,000	64,758,000
Prod. 6-7 to 6-14	1,839,000 — 11.4	1,950,000 — 19.4	1,252,000 + 30.1	441,000 +146.4	2,537,000 + 15.1	8,019,000 + 2.3
Ship. 6-7 to 6-14	2,431,000 + 45.7	594,000 — 51.5	737,000 — 68.2	1,036,000 — 0.5	1,715,000 +122.1	6,513,000 — 7.3
Stocks, June 14	10,875,000 — 5.2	26,788,000 + 5.4	3,801,000 + 15.7	17,080,000 — 3.4	8,120,000 + 11.3	66,664,000 + 2.3
Ratio Sales to Prod.	132.1%	30.5%	58.9%	234.9%	67.6%	81.2%
FUEL OIL—Gallons						
Stocks, June 7	15,209,000	57,763,000	48,377,000	33,577,000	30,540,000	185,466,000
Prod. 6-7 to 6-14	5,385,000 — 15.1	8,791,000 + 7.3	7,404,000 + 1.4	8,321,000 + 1.7	9,560,000 + 14.8	39,461,000 + 3.2
Ship. 6-7 to 6-14	5,914,000 + 36.6	7,274,000 + 24.8	6,722,000 — 1.7	9,021,000 — 2.6	9,896,000 + 35.8	38,827,000 +13.0
Stocks, June 14	14,680,000 — 3.5	59,280,000 + 2.6	49,059,000 + 1.4	32,877,000 — 2.1	30,204,000 — 1.1	186,100,000 + 0.3
Ratio Sales to Prod.	109.8%	82.7%	90.8%	108.4%	103.5%	98.4%

Gasoline Produced by Various Methods, Week Ended June 14

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	6,073,000	61.6	12,281,000	65.9	6,221,000	74.5	4,127,000	96.5	2,952,000	42.8	31,654,000	65.9
Cracked	3,532,000	35.8	5,306,000	28.5	1,288,000	15.4	.....	....	3,145,000	45.6	13,271,000	27.6
Natural	258,000	2.6	1,037,000	5.6	846,000	10.1	151,000	3.5	804,000	11.6	3,096,000	6.5
Total	9,863,000		18,624,000		8,355,000		4,278,000		6,901,000		48,021,000	

+ or — columns are % change over previous week.

Mid-Continent Gasoline Stocks Again Lowered

Staff Special—By Telegraph

TULSA, June 18

GASOLINE shipments from the 93 Mid-Continent refineries moved up to the 50,000,000-gallon mark again in the week ended June 14. More favorable motoring weather in much of the Middle West caused a draft on stocks jobbers laid in immediately following crude oil and tank wagon price advances late in May. Stocks were lowered more than 2,000,000 gallons.

Gasoline shipments increased more than 3,000,000 gallons last week over shipments the week before. Kansas refiners enjoyed a portion of the increase but Oklahoma refiners shipped 500,000 gallons less than they shipped in the first week of June. North Texas refiners increased shipments almost 2,000,000 gallons and West Texas refiners increased shipments 1,500,000 gallons. Arkansas-Louisiana

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended June 14. Change in stocks figures from May 17.

GASOLINE

	Gallons
Production	196,990,000
Shipments	202,385,000
Net change in stocks	—5,395,000
Ratio sales to production	102.7%

KEROSENE

Production	26,341,000
Shipments	27,114,000
Net change in stocks	—773,000
Ratio sales to production	102.9%

STOVE DISTILLATE

Production	4,644,000
Shipments	3,833,000
Net change in stocks	+811,000
Ratio sales to production	82.5%

GAS OIL

Production	34,987,000
Shipments	30,648,000
Net change in stocks	+4,339,000
Ratio sales to production	87.6%

FUEL OIL

Production	161,263,000
Shipments	147,448,000
Net change in stocks	+13,815,000
Ratio sales to production	91.4%

refiners failed by 160,000 gallons to move as much gasoline as they did the first week of June.

Crude runs were reduced by 11,500 barrels daily average in Kansas and by 7300 barrels daily average in Oklahoma. Runs were increased 700 barrels daily average in North Texas and were little changed in West Texas. Runs were increased 13,100 barrels daily average in Louisiana and Arkansas. Runs were reduced for the field as a whole 4300 barrels daily average.

Gasoline production was decreased 8.5 per cent in Kansas and 6.2 per cent in Oklahoma. North Texas production was increased 3.6 per cent but West Texas production was off 4.6 per cent. Production in Louisiana-Arkansas was increased 20.7 per cent. Production for the field, however, was off 1.8 per cent.

Kansas refiners reduced stocks almost 1,000,000 gallons but Oklahoma refiners increased stocks 1,400,000 gallons. North Texas stocks were reduced 500,000 gallons and West Texas stocks 2,000,000 gallons. Louisiana-Arkansas stocks were increased 130,000 gallons.

Kerosene production for the field was lower by 200,000 gallons while shipments were off 160,000 gallons. Stocks were reduced 400,000 gallons. Kansas refiners reduced stocks 180,000 gallons and Oklahoma refiners cut stocks 480,000 gallons. North Texas refiners went into storage for 230,000 gallons. Louisiana-Arkansas refiners almost doubled their stocks.

Gas oil shipments were larger than production in West Texas only. Stocks were increased 1,500,000 gallons. Production was up almost 200,000 gallons with shipments off 500,000 gallons in the whole field.

Distillate stocks were reduced in West Texas and Louisiana-Arkansas, but increased in the other districts.

Reduction in fuel oil production with a slight increase in shipments caused Kansas refiners to draw on stocks. Oklahoma refiners added to storage as did the North Texas refiners. West Texas and Louisiana-Arkansas refiners also drew on stocks. Shipments for the field were up 4,500,000 gallons with production 1,200,000 gallons more than a week before. Stocks for the field increased approximately 700,000 gallons.

WASHINGTON, June 17.—Technologists of the National Petroleum Association made their annual visit to the Bureau of Standards June 14. Arrangements for the trip were made by A. W. Scott, Empire Oil Works, Oil City, Pa., trustee in charge of the association's Department of Standards and Tests. The visiting technologists were under the care of Fayette B. Dow, general counsel of the association and members of his staff.

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Refinery - Tank Wagon Markets

National Petroleum News

Oklahoma Refiners Pat on Gasoline In Face of Outside Competition

Staff Special
TULSA, June 15

A BUYING lull which began to be felt around June 1 still held sway over the Mid-Continent refinery market at the month's halfway mark. Jobbers during the second week of June ordered only small lots of gasoline and kerosene for spot shipment. Contract shipments also were slow. Prices lost some ground in several districts.

Exporters showed no interest in any district either for gasolines or kerosenes.

Natural gasolines suffered because of the slow movement of refinery gasolines. Lack of steady buying caused prices to move downward slowly, net losses amounting to 0.125 to 0.25 cent a gallon.

Distillates were quiet. Gas oil was in lighter demand. High gravity fuel oils were more active and prices moved up slightly, but heavy grades lost some ground. Other commodities were steady in price and demand.

Gasolines

Refiners in all districts of the Mid-Continent complained the past week because of slow demand for gasolines. Several of them reported they had gasoline sold but had been unable to get shipping instructions as fast as they desired.

Some of the gasoline was sold soon after the crude advance late in May and buyers in some instances overbought, anticipating a larger consumption in their territories than had been experienced. Others bought for future shipment hoping to get as much gasoline as possible at prices which they knew at the time of the sale were a "bargain" in the face of the crude and tank wagon advances.

All of the slowness the past week, however, cannot be blamed on this type of buying. The weather had its effect, rain in much of the Middle West having cut down gasoilne consumption materially.

Reports from various districts June 15 indicated weather had been excellent the past two days and jobbers anticipated a decided increase in gasoline consumption over the week end.

Refiners meanwhile predicted the buying lull was about at an end. They were of the opinion a combination of good weather and the approaching July 4 holiday would cause a noticeable increase in jobber buying the last two weeks of June.

Oklahoma refiners made virtually no changes in gasoline prices. Two or three refiners reduced prices for 58-60 U. S. Motor 0.125 to 0.25 cent but continued to be within the 9 to 9.25 cent quotation range.

Competition from other Mid-Continent districts began to make its appearance. North Texas refiners either must have export business so they can make high gravity gasolines or they must make U. S. Motor and move it in competition with other districts. They have not had any sizable export business for some time, and the domestic demand has been light since the crude advance. Stocks have increased at several plants.

The result has been a lowering of prices 0.25 to 0.375 cent in some instances because storage facilities at many north Texas plants are not sufficiently large to handle production for any extended length of time with buying as extremely light as it has been the past several days.

West Texas refiners reduced their prices 0.25 cent but they were reported to be in better shape than the north Texas group. This was primarily because of low stocks and the fact that a few of the plants operated at reduced speed while repairs were made.

The Louisiana and Arkansas refiners made no changes in prices but reported shipping instructions were slow. Kansas refiners made virtually the same report.

Natural Gasolines

Natural gasoline manufacturers felt the buying lull which hovered over the refined gasolines. Several of them reported they had natural gasoline sold to refiners but that the refiners were receiving such a small number of shipping instructions they were having to hold up shipments of naturals. Other refiners reported they were not in the market at the present time for naturals because their refined products had moved so slowly.

No large buying was reported. Phillips Petroleum Co. was in the market a portion of the time buying grade AA for storage but because of the fact that the company requires the goods to meet full specifications at destination several manufacturers were reluctant to do business with them. The company last month bought a quantity of grade AA and when some of it reached destination it was off specifications. Phillips had no way of handling the off specifications goods at its terminal and accordingly rejected the cars and manufacturers had to dispose of the gasoline elsewhere.

Kerosenes

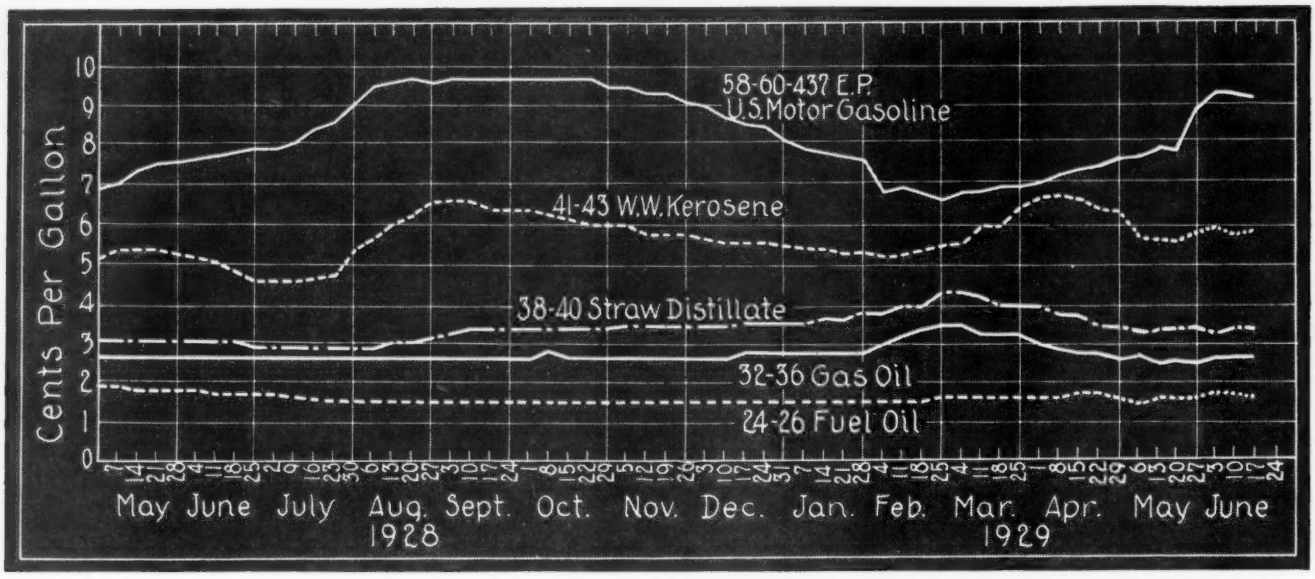
Kerosene movement was reported slow in all districts. North Texas refiners were the only ones who apparently kept shipments in line with production. That was because of export orders placed some time ago but which will not be completed for another week.

The buying lull failed to have any material effect on prices. Refiners continued to anticipate an improved demand within the next two to four weeks because of the harvesting season.

Gas Oils and Distillates

Straw gas oil in Oklahoma was comparatively scarce but other grades were more freely offered than had

Current Prices of Principal Mid-Continent Refined Products


Cents Per Gallon
58-60-437 E.P. U.S. Motor Gasoline
41-43 W.W. Kerosene
38-40 Straw Distillate
32-36 Gas Oil
24-26 Fuel Oil
May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1928
1929

Prices shown are on Group 3 basis and extended to date shown in Refinery Market Tables Section of this issue

been the case two or three weeks ago.

Buying for cracking purposes was reported slower, due probably to the fact that refiners hesitated to increase cracking operations in face of the slow demand for gasolines and the large stocks now on hand.

Distillates were virtually out of the spot market picture. Refiners were busy preparing and mailing contracts for next season but little actual business was reported the past week.

Fuel Oils

Several grades of the lighter fuel oils advanced from 2.5 to 5 cents a barrel with demand reported more active. Low gravity fuel oil was not nearly as active and several refiners lowered prices somewhat before the end of the week. Stocks were reported accumulating at some plants with cracking units more rapidly than desired.

Neutral Oils and Wax

No price changes were noted for Oklahoma neutral oils or cylinder stocks. Demand continued to be good, a majority of refiners reported. Bright stock especially was in active demand. Wax was slightly more active but the price range was narrower than for the first week of June. Prices ranged from 2.50 to 2.625 cents a pound for 124-126 white crude scale.

Consider Road Bond Issue And Higher Gas Tax

TULSA, June 15.—The Oklahoma legislature the past several days has been struggling with a proposed bill to increase the gasoline tax from 3 cents to either 4 or 5 cents, and a road bond issue of over a hundred million dollars.

The administration is reported backing the proposed measure. It met defeat in the House June 14 but several representatives changed their votes in order to have it brought up for reconsideration.

Reports here indicate the legislature is fairly well divided over the proposed increase in the gasoline tax and the proposed road bond issue. Some of the legislators argue that if the tax is increased the revenue will be sufficient to carry out a highway program without the necessity of a bond issue with its heavy interest burden, and they accordingly will be opposed to a bond issue. Others argue that unless the gasoline tax is increased a road bond issue would not be voted by the taxpayers of the state.

TULSA, June 15.—L. A. Snyder has resigned as manager of sales for Rock Island Refining Co., Duncan, according to word received here, and has removed with his family to Enid. Mr. Snyder a few weeks ago resigned as sales manager for Champlin Refining Co., Enid, to become affiliated with the Rock Island Refining Co. His future plans have not been announced.

TULSA, June 15.—Mid-Continent Petroleum Corp. the afternoon of June 14, was host to more than a thousand delegates in Tulsa to attend the annual convention of the American Institute of Banking. The delegates were shown through the company's refinery in west Tulsa, and then were treated to a terrapin race staged on the corporation's athletic grounds. There were 65 terrapins in the race, one for each chapter represented at the convention.

Prices A Year Ago

Prices of principal refined products, Chicago tank wagon and crude, a year ago (June 18, 1928), were:

Oklahoma: 58-60 U. S. Motor, 7.8033c; Grade A natural, 5.75c; 41-43 kerosene, 4.75-5.00c; 24-26 fuel oil, $0.70-$0.75 per barrel.

Pennsylvania: 58-60 U. S. Motor, 10.50-11.00c; 47 w.w. kerosene, 7.25-7.50c; 36-40 fuel oil, 5.00-5.25c.

Tank wagon, Chicago 14c.

Crude, Mid-Continent, 35-35.9 gravity, $1.25; Pennsylvania, $2.90.

Prices 10 Years Ago

Prices of principal refined products, Chicago tank wagon and crude 10 years ago (June 16, 1919), were:

Oklahoma: 58-60 U. S. Motor, 18.50c; 80-84 Natural gasoline, 24c; 41-43 w.w. kerosene, 9c; 24-26 fuel oil, $0.90 per barrel.

Pennsylvania: 58-60 U. S. Motor, 20.50-20.75c; 47 w.w. kerosene, 10.50-11.00c; 38-40 fuel oil, 4.25-4.75c.

Tank wagon, Chicago, 20.50c.

Crude, Mid-Continent 35-35.9 gravity, $2.25; Pennsylvania, $4.

Chicago Resale Market

Gasoline Marks Time; Weather Poor

Staff Special
CHICAGO, June 15

THE Chicago gasoline market was marking time as the week ended June 15. Very little spot gasoline business was being done although contract demand was reported fairly consistent. Reports from over the Standard of Indiana territory indicated that the bulk of jobbers still had their gasoline storage full and would be out of the market for a time.

Most of the trade were of the opinion that the chances for higher or lower prices over the coming week depended almost solely on the weather. For the past week temperatures have been below normal and there was considerable rain. This, of course, retarded motoring and prevented jobbers from unloading their gasoline stocks. Most sellers said it would take only about four days of good motoring weather to bring jobbers back into the market.

Widely divergent reports were heard on spot U. S. Motor gasoline prices. Over the first half of the week very little Oklahoma Motor was available below 9 cents, but by June 15, several sellers sold these goods at 8.75 cents. U. S. Motor gasoline out of North and West Texas and Kansas sold mostly at 8.75 cents, Group 3 freight basis, over the week although several sellers moved some of this gasoline at 8.50 cents on June 14 and 15.

A number of carlot marketers reported being offered U. S. Motor gasoline, out of Oklahoma and Texas, at 8.25 cents for immediate shipment. However, as most marketers were already "long" some goods at higher prices and as business was dull, few of them were in a position to take advantage of these offers. One marketer reported being offered some Oklahoma U. S. Motor for shipment over the remainder of June at 8.25 cents.

The demand for higher gravity gasolines continued slack over most of the territory. Prices remained unchanged over the week but were off slightly at the close. The 60-62, 437 e. p. goods closed June 15 at 9 to 9.375 cents after moving at 9.25 to 9.375 cents previously. Gasoline of 60-62, 400 e. p. moved at 9.375 to 9.50 cents until June 15 and closed at 9.25 to 9.50 cents. The bulk of sales of 64-66, 375 e. p. were at 9.50 to 9.75 cents all week.

Several sellers reported a steady demand for kerosene while others said the market on this product was lifeless. Very little change was noted in prices and the bulk of sales of 41-43 w.w. were still at 5.75 to 6 cents. An occasional sale was reported down to 5.50 cents.

The cool, rainy weather over the past few weeks resulted in a light but consistent call for oils of home burner specifications, as it has been cold enough for apartment houses and private homes to keep their burners in use. One or two burner oil distributors reported enjoying the best demand the last two weeks in May and so far in June than for any similar period in several years.

The demand for gas and fuel oils by industrial concerns has been very satisfactory in most quarters and has kept prices for these commodities on a steady keel.

Several sellers reported moving zero gas oils at slightly reduced prices this week. The ordinary 32-36 dark gas oil continued to move mostly at 2.375 to 2.50 cents. Most sales of 32-36 dark zero gas oil were at 2.50 to 2.75 cents June 14 and 15 and at 2.625 to 2.75 cents earlier in the week. The 32-36 straw zero moved mostly at 2.75 to 2.875 cents until June 15 and closed then at 2.625 to 2.875 cents.

Prices of distillates and fuel oils were unchanged over those shown in the June 12 issue of NATIONAL PETROLEUM NEWS with exception of 18-22 high sulfur fuel oil. This product moved mostly at $0.475 to $0.50 on June 10 and 11 and at $0.50 flat thereafter.

Rather frequent showers and thunderstorms are likely over the Standard of Indiana territory next week. Temperatures will remain close to the seasonal normal most of the week.

Gulf Lubes Higher

HOUSTON, June 15.—Increased domestic demand and the recent stiffening of crude prices have now had their effect on Gulf Coastal lubricant markets.

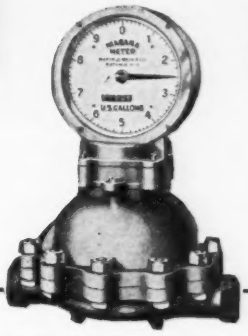
Various manufacturers have raised their list prices by selective adjustments on individual grades rather than arbitrarily advancing the entire list.

Some of them were already quoting at the high ranges shown in the tables of this publication whereas others continued to sell certain grades at low ranges.

ACCURACY

Regardless of how much or how little gasoline or oil passes through a Niagara meter, it accurately registers and records, preventing loss, theft or favoritism.

And a Niagara repays its cost by enabling you to sell and profit on the gasoline and oil that would be unaccounted for without a meter! Send today for our newest catalogue.



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2889 Main St., Buffalo, N. Y.

You Sell 50 Gallons Instead of "5"

Turn your "drive in" customers into bulk buyers and get ALL their business. Double and treble your volume of gas and oil sales. Others are doing it. So can you with this new

KWART KWICK
Home Oil Pump

This handy pump fits any drum or barrel. Ideal for home garages, working equally well with oil, gas or other liquids. Nominal in cost—long wearing. Built of finest brass, steel and cast iron. Big discounts to oil companies for quantities.

Distributing one of these pumps with bulk sales is a real way of boosting sales and of tying up with your customers for repeat business. Mail coupon today for descriptive literature.

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VIKING PUMP COMPANY
Cedar Falls, Ia.

--------- MAIL THIS ---------

Viking Pump Co., Dep't. B.

Please send details and prices on your Kwart Kwick Pump.

Name.....

Town.....

State.....

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

Comparative Prices of 58-60 U. S. Motor Gasoline, 437 E. P., Group 3 and Point of Origin, to Jobbers Only

In Effect June 17

	Price F.O.B. Group 3	*Price F.O.B. Point of Origin*	*If for Particular Destination*
Oklahoma	9.2366 (Wt. Avg.)	9.2366 (Wt. Avg.)	
Kansas	9.00-9.25		S. O. Neb. & Ind. Ter., etc.
Kansas		9.4943 (Wt. Avg.)	Kansas only.
North Texas	8.50-9.00	8.50-8.75	
West Texas	8.75-9.00	8.75-9.00	
Louisiana-Ark.	9.00-9.25		Mich., Ohio & Indiana.
Louisiana-Ark.		9.50	State or differential haul.
Indiana-Illinois	9.25	*	S. O. Ind. territory except Detroit and vicinity. For Ohio on delivered basis only.

*Shipments made from E. Chicago, Ind., and Wood River, Ill., according to conditions and freight rates; no prices F.O.B. point of origin can be given.

Weighted Average Prices

OKLAHOMA

	June 17		June 10		June 3	
	No. of cars	Price	No. of cars	Price	No. of cars	Price
58-60 U. S. Motor, 437 e. p.	56	9.2366	56	9.2366	56	9.1920
60-62 437 e. p. gasoline	2	9.4375	4	9.3125	4	9.3750
60-62 400 e. p. gasoline	1	9.5000	1	9.5000	2	9.6875
64-66 375 e. p. gasoline	No sales reported		3	9.8333	1	9.7500

The weighted average prices shown above reflect the steadiness of the Oklahoma refinery market despite the fact that shipments were slow and competition was stronger from outside areas last week.

Reporting refiners moved the bulk of their 58-60 U. S. Motor at a price range of 9 to 9.25 cents with a majority of them selling at the higher figure. Non-reporting refiners for the most part were in line on prices with the reporting refiners.

KANSAS

	June 17		June 10		June 3	
	No. of cars	Price	No. of cars	Price	No. of cars	Price
58-60 U. S. Motor, 437 e. p.	22	9.4943	13	9.5000	20	9.5375

Gasoline demand was reported fair within the state and refiners made only occasional deviations from their price lists. The weighted average above reflects the going market for spot gasolines within the state, the usual differential over Group 3 being maintained.

GASOLINE AND NAPHTHA

OKLAHOMA	Prices June 17	Prices June 10	Prices June 3
48-50 450 e.p. naphtha	8.75 – 9.00	8.75 – 9.00	8.625– 8.75
50-52 450 e.p. naphtha	8.75 – 9.00	8.75 – 9.00	8.625– 8.75
56-58 450 e.p. gasoline	8.75 – 8.875	8.75 – 9.00	8.625– 8.75
58-60 450 e.p. gasoline	8.875– 9.00	8.875– 9.00	8.625– 8.875
64-66 390 e.p. gasoline	9.625– 9.875	9.75 – 9.875	9.50 – 9.625
68-70 350-360 e.p. gasoline	9.875–10.00	9.875–10.00	9.625– 9.875

†Prices nominal ††Only one refiner quoting *Quotations only

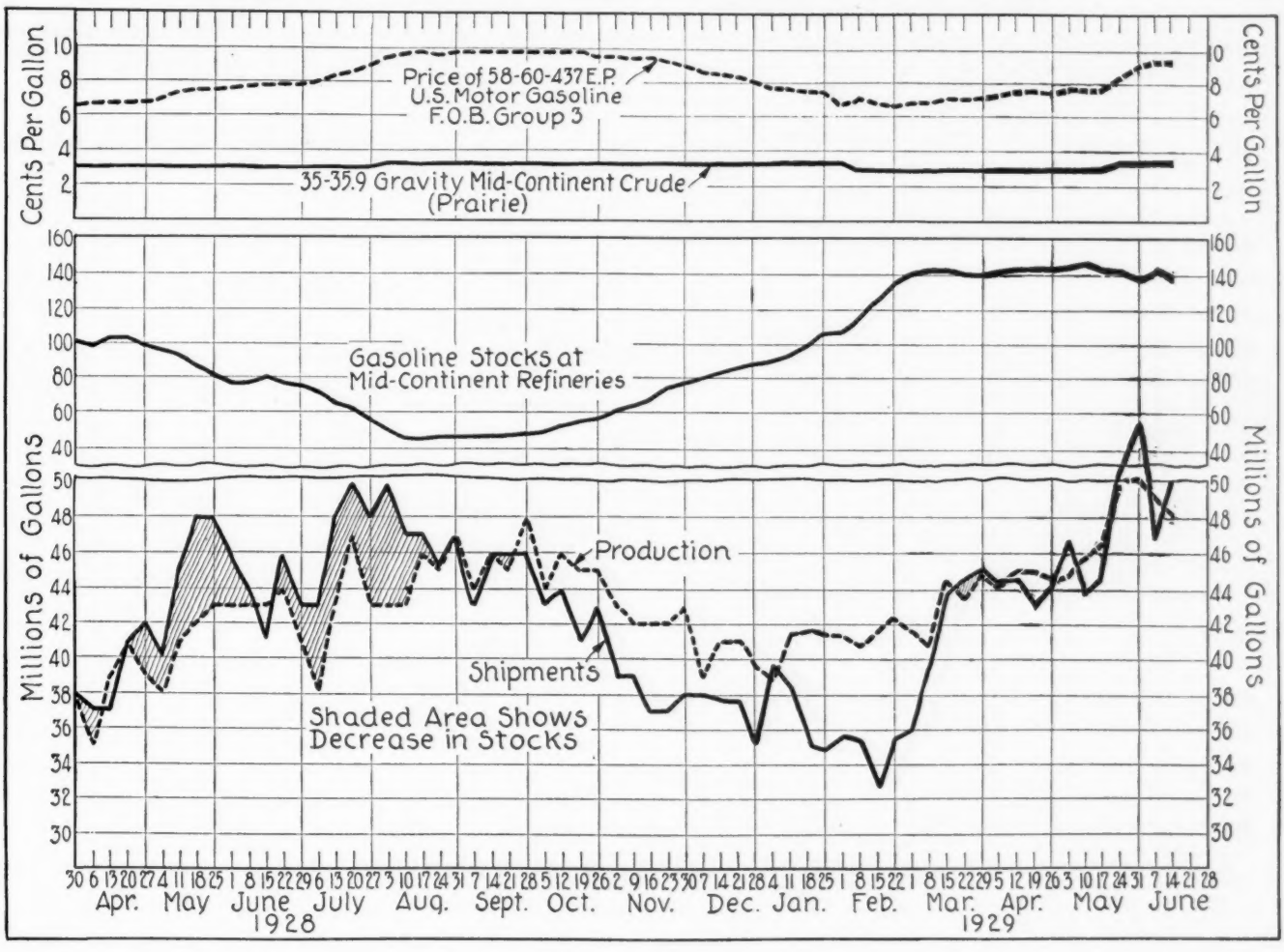
PENNSYLVANIA	Prices June 17	Prices June 10	Prices June 3
52-54 Naphtha	9.50 –10.00	9.50 –10.00	9.25 – 9.75
54-56 Naphtha	9.50 –10.25	9.75 –10.00	9.50 –10.00
58-60 U.S. Motor 437 e.p.	10.25 –10.50	10.25 –11.00	10.25 –11.00
60-62 400-410 e.p. gasoline	10.50 –11.00	10.50 –11.25	10.50 –11.25
64-66 390 e.p. gasoline	10.75 –11.50	11.00 –11.50	10.75 –11.50
68-70 Str-run gas 350-360 e.p.	11.50 –12.50	11.50 –12.50	11.50 –12.50

(Continued on Page 130)

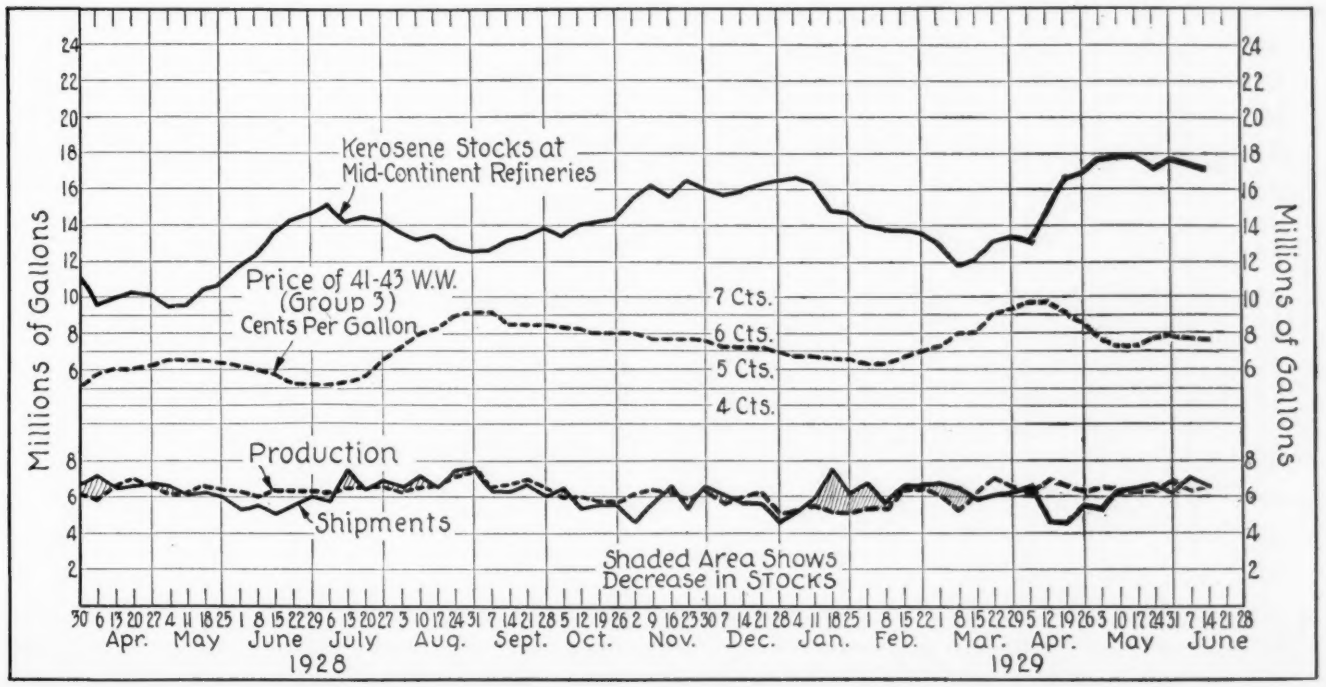
**Represents Both Sales and Quotations.

Barometer of Mid-Continent Refinery Market—Week Ending June 14

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, from Reports Made by 93 Plants to National Petroleum News


Cents Per Gallon
Price of 58-60-437 E.P. U.S. Motor Gasoline F.O.B. Group 3
35-35.9 Gravity Mid-Continent Crude (Prairie)
Gasoline Stocks at Mid-Continent Refineries
Millions of Gallons
Production
Shipments
Shaded Area Shows Decrease in Stocks
Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1928
1929

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 122.



Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

OHIO (Quotations of S. O. Ohio. 4c state tax to be added.)

U. S. Motor Gasoline	Prices June 17	Prices June 10	Prices June 3
Ohio, delivery at any point	12.00	12.00	12.00

KANSAS (F. O. B. refinery Kansas destination)

60-62 437 e.p. gasoline		.....	9.00 – 9.50
60-62 400 e.p. gasoline	10.00 –10.25	9.625– 9.75	9.50 –10.00
64-66 375 e.p. gasoline	10.00 –10.375	9.75 –10.00	9.75 –10.00

NORTH TEXAS

48-52 450 e.p. naphtha	8.50 – 8.625	8.50 – 8.625	8.25 – 8.375
56-58 450 e.p. gasoline	8.50 – 8.625	8.50 – 8.625	8.25 – 8.375
58-60 450 e.p. gasoline	8.50 – 8.625	8.50 – 8.625	8.25 – 8.50
58-60 U.S. Motor 437 e.p.	8.50 – 8.75	8.75 – 9.00	9.00
60-62 400 e.p. gasoline	9.25 – 9.375	9.25 – 9.50	9.125– 9.50
64-66 390 e.p. gasoline	9.50	9.50	9.50
64-66 375 e.p. gasoline	9.50 – 9.625	9.625– 9.75	9.50 – 9.625
68-70 350-360 e.p. gasoline	9.625– 9.75	9.625– 9.75	9.625– 9.75

**WEST TEXAS (F.o.b. West Texas refinery, for unrestricted shipment)

50-52 naphtha	8.25 – 8.50	8.50 – 8.75	8.50
56-58 437 e.p. gasoline	8.75	8.75	8.50 – 8.75
58-60 437 e.p. gasoline	8.75 – 9.00	8.75 – 9.00	9.00 – 9.25

NORTH LOUISIANA (N. La., Ark., and Miss. destination)

58-60 U.S. Motor, 437 e.p.	9.50	9.50	9.25

ARKANSAS (Arkansas destination only)

58-60 450 e.p. gasoline		.....	9.00
58-60 U.S. Motor 437 e.p.	9.50	9.50	9.25
61-63 390 e.p. gasoline	9.625	††9.625	††9.625

CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)

54-58 U.S. Motor 437 e.p.	8.00 –10.00	8.00 –10.50	8.25 –11.50
58-61 375-400 e.p. gasoline	9.00 –10.50	9.00 –11.50	9.00 –12.25
42-45 Eng. dis. 445-480 e.p.	7.00 – 8.50	7.00 – 8.50	7.00 – 8.50

NATURAL GASOLINE

(Note: End point of all grades, not over 375 F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA

Grade AA, 80-87.9, 90% Recovery	7.50	7.50	7.50
Grade A, 72-79.9, 90% Recovery	7.50	7.50 – 7.75	7.50
Grade BB, 84-92, 85% Recovery	7.00 – 7.25	7.125– 7.25	7.25
Grade B, 76-83.9, 85% Recovery	7.00 – 7.25	7.125– 7.25	7.25
Grade C, 80-90, 78% Recovery	7.00 – 7.25	7.125– 7.25	7.25

NORTH TEXAS (F. O. B. Breckenridge)

Grade AA, 80-87.9, 90% Recovery	7.50	7.50	7.50
Grade A, 72-79.9, 90% Recovery	7.50	7.50 – 7.75	7.50
Grade BB, 84-92, 85% Recovery	7.00 – 7.25	7.125– 7.25	7.25
Grade B, 76-83.9, 85% Recovery	7.00 – 7.25	7.125– 7.25	7.25
Grade C, 80-90, 78% Recovery	7.00 – 7.25	7.125– 7.25	7.25

NORTH LOUISIANA (F. O. B. Monroe District)

Grade AA	†8.00	†8.00	†8.00
Grade BB	†7.375	†7.50	†7.50
Grade C	†7.375	†7.375	†7.375

CALIFORNIA

75-85, 375-390 e.p. blend	9.00 – 9.50	8.50 – 9.50	8.50 – 9.00

MOTOR FUEL BLENDS

OKLAHOMA

	Prices June 17	Prices June 10	Prices June 3
64-66 Blend 437 e.p.		Discontinued June 3	

BURNING OILS

PENNSYLVANIA

45 w.w. kerosene	6.625– 7.00	6.75 – 7.25	6.75 – 7.25
46 w.w. kerosene	6.875– 7.25	7.00 – 7.75	7.00 – 7.50
47 w.w. kerosene	7.25 – 7.75	7.625– 8.00	7.625– 8.00
300 mineral seal	7.50 – 7.75	7.50 – 7.75	7.50 – 7.75

OKLAHOMA

41-43 w.w. kerosene	5.75 – 6.00	5.75 – 6.00	6.00
42-44 w.w. kerosene	6.25 – 6.50	6.25 – 6.50	6.375– 6.50

KANSAS (F. O. B. refinery Kansas destination)

41-43 w.w. kerosene	6.125– 6.375	6.00 – 6.25	6.00 – 6.25
42-44 w.w. kerosene	6.625– 6.75	6.50 – 6.75	6.50

NORTH TEXAS

40-42 w.w. kerosene	5.375	5.375	5.375
41-43 w.w. kerosene	5.50 – 5.75	5.50 – 5.75	5.50 – 5.625

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

41-43 w.w. kerosene	6.00 – 6.50	6.50 – 6.75	6.50
42-44 w.w. kerosene		.....	6.75

ARKANSAS (Arkansas destination only)

41-43 kerosene	6.00 – 6.50	.....	.....
42-44 kerosene	6.75	6.75	6.75

CALIFORNIA

38-40 w.w. kerosene	5.50 – 5.60	5.25 – 6.50	5.00 – 6.00

NEUTRAL OIL

PENNSYLVANIA

Vis.		(Viscosity at 70°F.)	
200 No. 3 Assoc. Filt.	28.50 –29.50	29.00 –29.50	29.00 –30.00
180 No. 3 Assoc. Filt.	25.00 –27.00	25.00 –27.00	25.00 –27.00
150 No. 3 Assoc. Filt.	21.00 –22.00	21.00 –22.00	21.00 –22.00
	(Non Viscous)		
34 Grav. 330-340 Flash	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00

**OKLAHOMA

Vis.	Color	(Viscosity at 100°F.)		
100	No. 2	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00
150	No. 3	7.50 – 8.25	7.50 – 8.50	7.50 – 8.50
150	No. 4	6.75 – 7.50	6.75 – 7.50	6.50 – 7.50
180	No. 3	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
180	No. 4	8.75 – 9.25	8.75 – 9.25	8.75 – 9.75
180	No. 5	8.50 – 9.00	8.50 – 9.00	8.50 – 9.50
200	No. 3	9.50 –11.00	9.50 –11.00	9.50 –11.00
200	No. 4	9.00 –10.25	9.00 –10.25	9.00 –10.25
200	No. 5	8.75 – 9.50	8.75 – 9.50	8.75 – 9.50
220	No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220	No. 4	12.25 –12.50	12.25 –12.50	12.25 –12.50
220	No. 5	11.50 –12.00	11.50 –12.00	11.50 –12.00
240	No. 3	13.00 –13.50	13.00 –13.50	13.00 –13.50
240	No. 4	12.00 –13.00	12.00 –13.00	12.00 –13.00
240	No. 5	11.00 –13.00	11.00 –13.00	11.00 –13.00
280	No. 3	14.00 –16.00	14.00 –16.00	14.00 –16.00
280	No. 4	13.00 –15.00	13.00 –15.00	13.00 –15.00
280	No. 5	12.00 –14.00	12.00 –14.00	12.00 –14.00
300	No. 5-6	16.00 –17.00	16.00 –17.00	16.00 –17.00

†Prices nominal ††Only one refiner quoting *Quotations only **Represents both sales and quotations.

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

GULF COASTAL

Vis.	Color	Prices June 17	Prices June 10	Prices June 3
		(Viscosity at 100°F., pour test 0)		
100	No. 2 Pale	6.50 – 7.00	6.50 – 7.00	6.50 – 7.00
200	No. 3 Pale	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
300	No. 3 Pale	10.25 –10.75	10.00 –10.50	10.00 –10.50
500	No. 3½ Pale	12.00 –12.50	12.00 –12.50	12.00 –12.50
750	No. 4 Pale	13.25 –13.75	13.00 –13.50	13.00 –13.50
200	No. 5½ Red Oil	8.25 – 8.75	8.00 – 8.50	8.00 – 8.50
300	No. 5½ Red Oil	9.50 –10.00	9.00 – 9.50	9.00 – 9.50
500	No. 6 Red Oil	11.00 –11.50	10.00 –10.50	10.00 –10.50
750	No. 6 Red Oil	12.00 –12.50	12.00 –12.50	12.00 –12.50

CALIFORNIA

Vis.	Color		(Viscosity at 100°F.)	
100	No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200	No. 3	11.50	11.50	11.50
300	No. 3	13.00	13.00	13.00
450	No. 3	15.50	15.50	15.50
550	No. 3	16.50	16.50	16.50
600	No. 3	17.00	17.00	17.00
200	No. 5	11.00	11.00	11.00
300	No. 5	12.00	12.00	12.00
400	No. 5	14.00	14.00	14.00
500	No. 5	15.00	15.00	15.00
600	No. 5	16.00	16.00	16.00
700	No. 7	18.00	18.00	18.00

CYLINDER STOCKS

**OKLAHOMA

190-200D Vis. at 210° Brt. St.	37.00 –40.00	37.00 –40.00	35.00 –37.00
150-160D Vis. at 210° Brt. St.	35.00 –37.00	35.00 –37.00	34.00 –37.00
150-160E Vis. 210° Brt. St.	29.00 –33.00	29.00 –33.00	29.00 –33.00
600 St. Ref. Olive Green	15.00 –20.00	15.00 –20.00	15.00 –20.00
600 St. Ref. Dark Green	13.50 –16.00	14.00 –16.00	14.00 –16.00
Black Oil	5.00	5.00	5.00

PENNSYLVANIA (A. S. T. M. Tests)

600 Steam Refined, filterable	31.00 –33.50	32.00 –34.00	33.00 –35.00
650 Steam Refined	38.50 –39.00	39.00 –41.00	39.50 –41.00
600 Flash	42.00 –43.00	42.00 –44.00	42.00 –45.00
625 Flash	45.00	45.00 –47.00	45.00 –47.00
600 Warren E	36.50 –37.00	37.00 –37.50	37.00 –37.50
600 Oil City E	35.50 –36.00	36.00 –36.50	36.00 –36.50
600 D Filtered	40.00 –41.00	40.00 –41.00	40.00 –41.00
Cold Test Stock, 40-50p. p., 140-150 vis. at 210° 540-550 flash, No. 8 color	53.00 –55.00	54.00 –56.00	55.50 –56.00
40-50 p.p., 140-150 vis. at 210°, 540-550 flash, No. 6-6½ color diluted	51.00 –52.00	52.00 –53.00	54.00 –55.00

WAX

PENNSYLVANIA Per pound, New York

122-124 white crude scale, a. m. p.	2.75 – 2.875	2.875– 3.00	2.875– 3.00
124-126 white crude scale, a. m. p.	2.75 – 3.00	3.00	3.00

OKLAHOMA

**124-126 White Crude Scale, a. m. p.	2.50 – 2.625	2.50 – 2.75	3.00 – 3.25

CALIFORNIA

White crude scale, per pound, ton lots, a. m. p.	6.00 – 6.50	6.00 – 6.50	5.00 – 6.00

FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

	Prices June 17	Prices June 10	Prices June 3
36-40 fuel oil	4.75 – 5.375	4.875– 5.375	5.00 – 5.25
30-34 fuel oil	4.50 – 4.625	4.50 – 4.75	4.625– 4.875
28-32 fuel oil	4.50 – 4.625	4.50 – 4.75	4.625– 4.875

OKLAHOMA

38-40 straw distillate	†3.25 – 3.50	†3.25 – 3.50	†3.25 – 3.375
36-38 straw distillate	†3.125– 3.25	†3.125– 3.25	†3.125– 3.25
32-36 straw gas oil	2.50 – 2.75	2.50 – 2.75	2.50 – 2.75
32-36 dark gas oil	2.375– 2.50	2.50	2.50 – 2.625
32-36 straw zero gas oil	2.625– 2.75	2.625– 2.75	2.50 – 2.75
28-30 zero fuel oil	$0.90 – 0.95	$0.875– 0.95	$0.875– 0.95
28-30 fuel oil (in bbls.)	$0.875– 0.95	$0.875– 0.925	$0.875–$0.925
26-28 fuel oil (in bbls.)	$0.70 – 0.80	$0.675– 0.75	$0.675– 0.75
24-26 fuel oil (in bbls.)	$0.675– 0.75	$0.675– 0.75	$0.675–$0.75
22-26 fuel oil (in bbls.)	$0.60 – 0.625	$0.55 – 0.625	$0.55 –$0.625
18-22 fuel oil (in bbls.)	$0.50 – 0.575	$0.55 – 0.575	$0.55 – 0.575
16-18 fuel oil (in bbls.)	$0.45 – 0.55	$0.50 – 0.55	$0.50 – 0.55
14-16 fuel oil (in bbls.)	$0.45 – 0.50	$0.45 – 0.50	$0.45 – 0.50

KANSAS (F. O. B. refinery Kansas destination)

38-40 straw distillate	3.375– 3.50	3.50	3.375– 3.50
36-38 straw distillate	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
32-36 gas oil	2.50 – 2.75	2.375– 2.50	2.375– 2.50
24-26 fuel oil	$0.70 – 0.75	$0.70 – 0.75	$0.70 – 0.75
18-22 fuel oil	$0.625– 0.70	$0.625– 0.70	$0.625– 0.70
10-14 fuel oil	$0.525–$0.575	$0.525– 0.55	.....

NORTH TEXAS

38-40 straw distillate	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
32-36 gas oil, cracked	2.25 – 2.375	2.25 – 2.375	2.25 – 2.375
32-36 St. reduced gas oil	$2.375– 2.50	2.25 – 2.50	2.25 – 2.375
24-26 fuel oil (in bbls.)	$0.625– 0.70	$0.60 – 0.70	$0.65 – 0.70
20-24 fuel oil	$0.625– 0.70	$0.60 – 0.70	$0.65 – 0.70

**WEST TEXAS (F.o.b. West Texas refinery, for unrestricted shipment)

34-38 gas oil	2.375– 2.50	2.375– 2.50	2.375– 2.50
30-32 gas oil	2.125– 2.25	2.125– 2.25	2.00 – 2.25
18-22 fuel oil	$0.375– 0.45	$0.375–$0.425	$0.35 –$0.40

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

32-36 gas oil, dark	2.75 – 3.00	2.75 – 3.00	3.00
32-36 gas oil, straw	2.75 – 3.00	2.75 – 3.00	3.00
10-14 fuel oil (in bbls.)	$0.75 – 0.80	$0.80	$0.70 – 0.75

ARKANSAS (Arkansas destination only)

32-36 gas oil, straw	3.00 – 3.25	3.00 – 3.125	3.00 – 3.25
32-36 gas oil	3.00 – 3.25	3.00 – 3.125	3.00 – 3.25
28-30 gas oil	2.75	2.75	2.75
10-14 fuel oil	$0.75 – 0.80	.....	.....

CALIFORNIA (F. O. B. San Joaquin Valley. At. San Francisco, 4c per bbl. more)

14-18 fuel oil (per bbl.)	$0.55 –$0.65	$0.55 –$0.65	$0.55 –$0.65
14-18 Bunker oil (per bbl.)	$0.65 –$0.75	$0.65 –$0.75	$0.65 –$0.75
30-34 gas oil (per bbl.)	$0.95 –$1.05	$0.95 –$1.05	$0.90 –$1.05
27 Plus Diesel oil (per bbl.)	$0.90 –$1.00	$0.90 –$1.00	$0.90 –$1.00

PETROLATUMS

PENNSYLVANIA (In barrels, carload lots, f. o. b. refinery. In tank cars ⅝c to ¾c per pound less.) Two refiners quoting.

Snow White	8.25 – 8.50	8.25 – 8.50	8.25 – 8.50
Lily White	7.25 – 7.625	7.25 – 7.625	7.25 – 7.625
Cream White	6.25 – 6.625	6.25 – 6.625	6.25 – 6.625
Light Amber	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
Amber	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
Red	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125

PETROLEUM COKE

**OKLAHOMA

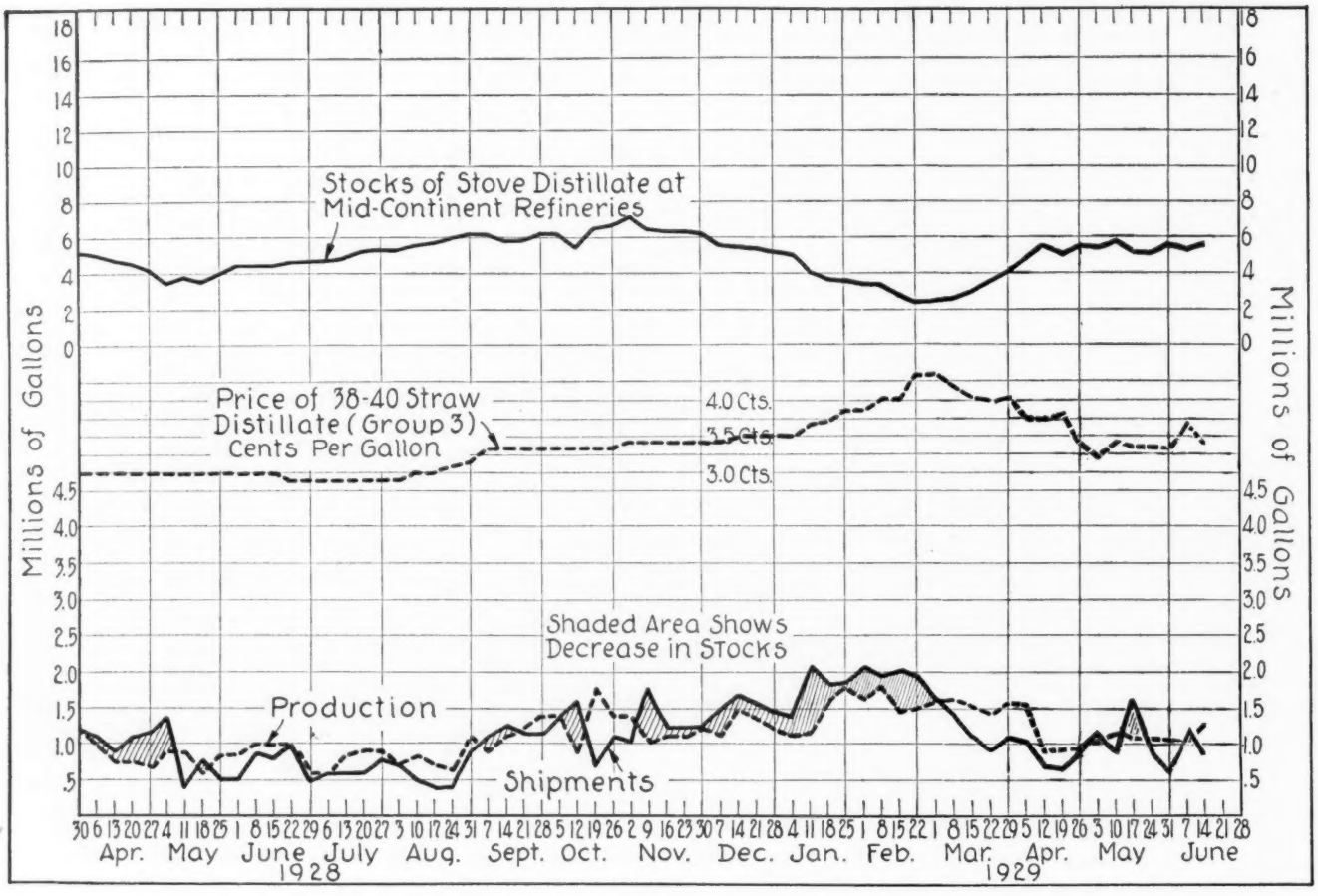
(Per ton in car lots)

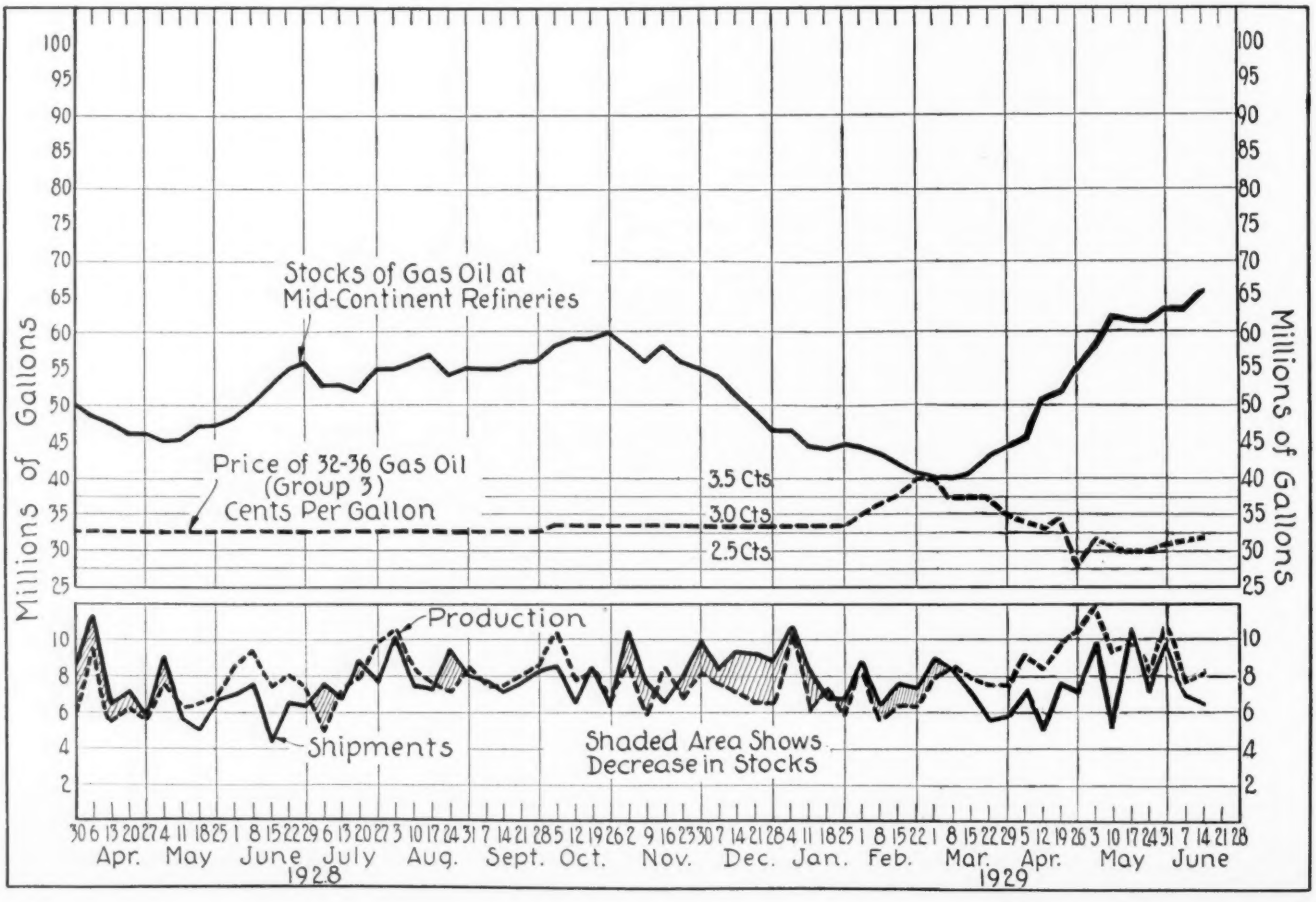
Lump	$4.50 – 5.00	$4.50 – 5.00	$4.50 – 5.00
Still run	$3.00	$3.00	$3.00
Breeze	$2.00	$2.00	$2.00

†Prices Nominal ††Only One Refiner Quoting *Quotations only **Represents both sales and quotations

Barometer of Mid-Continent Refinery Market—Week Ending June 14

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, from Reports Made by 93 Plants to National Petroleum News


Stocks of Stove Distillate at Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) Cents Per Gallon
4.0 Cts.
3.5 Cts.
3.0 Cts.
Shaded Area Shows Decrease in Stocks
Production
Shipments
Millions of Gallons
Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1928
1929


Stocks of Gas Oil at Mid-Continent Refineries
Price of 32-36 Gas Oil (Group 3) Cents Per Gallon
3.5 Cts.
3.0 Cts.
2.5 Cts.
Production
Shipments
Shaded Area Shows Decrease in Stocks
Millions of Gallons
Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1928
1929

How Do *YOU* Clean Your Oil Drums?

Here is a partial list of oil companies using the Perfection Vacuum Unit

Illinois
W. H. Barber Oil Co., Chicago
Calumet Refining Co., Chicago
Johnson Oil Refining Co., Chicago Heights

Iowa
Riley Penn Oil Co., Burlington
Bartles-Shepherd Oil Co., Waterloo

Maryland
Sherwood Bros., Inc., Baltimore

Massachusetts
Underhap Oil Company, Boston

Minnesota
W. H. Barber Co., Minneapolis
Fred G. Clark Co., Minneapolis
Crescent Oil Co., Minneapolis
Manhattan Oil Co., Minneapolis
Midwest Oil Co., Minneapolis
R. A. Hyde Oil Co., Pipestone
Battenfield Grease & Oil Co., St. Paul

Missouri
Barnsdall Refining Co., Kansas City

Montana
Lincoln Oil Co., Great Falls

New York
Smith Oil Co., Inc., Lowville
Anglo-Mexican Petroleum Co., New York City
C. E. Mills Oil Co., Syracuse

Ohio
Du Bois Oil Co., Bellaire
The Ohio Grease Co., Loudonville
Sun Oil Co., Toledo
Arrow Oil Co., Wooster

Pennsylvania
Kendall Refining Co., Bradford
The Aero Gasoline Co., Inc., Erie
Jos. B. Berry Sons Co., Inc., Oil City
Sun Oil Co., Philadelphia
Thompson & Co., Pittsburgh
Industrial Oil & Grease Co., Warren

Virginia
South Atlantic Oil Co., Norfolk
Topping Oil Company, Williamsburg

West Virginia
Ohio Valley Refining Co., St. Marys

Canada
McColl Bros., Ltd., Toronto, Ont.

THE PERFECTION VACUUM UNIT

EVERY one wholesaling lubricating oils has the problem of cleaning the empty oil drums that are returned before re-filling with fresh oil. The Perfection Vacuum Unit shown in the illustration provides a very efficient means for doing this at a big saving in time and labor.

The Perfection Vacuum Pump has 14 years of satisfactory service behind it as a guarantee of its efficiency, durability, and economy of operation. Every Perfection Vacuum Pump is guaranteed to produce at least 26 inches of vacuum.

The No. 3 Vacuum Unit, illustrated above, is equipped with a ¼ H.P. Motor and a 15 gal. galvanized tank, mounted on a cast iron base which can be bolted to the floor or moved as desired. The drainings can be piped to a settling tank if it is desired to re-claim the oil.

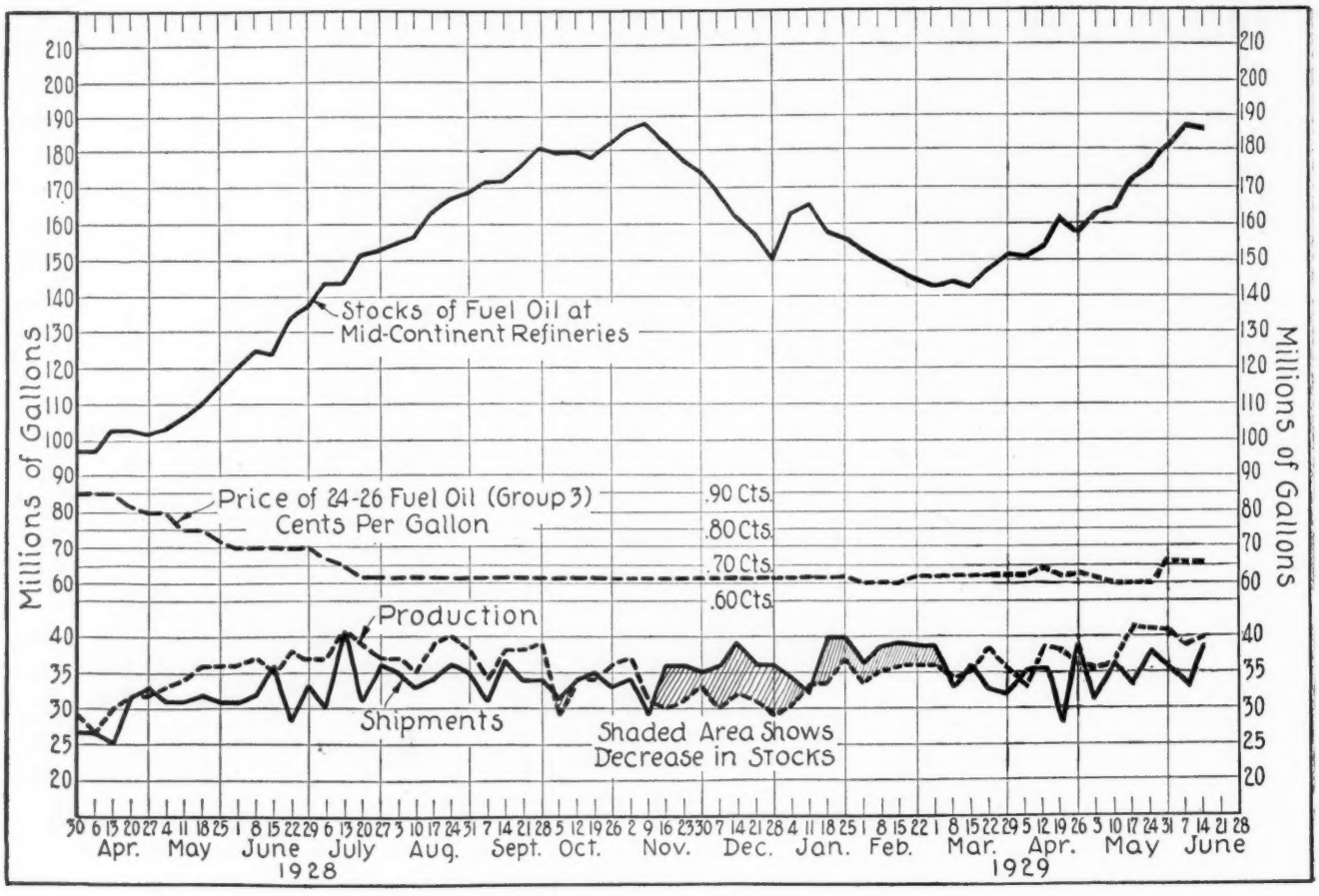
Write for further information and prices.

Perfection Manufacturing Company

2194 East Hennepin Avenue **Minneapolis, Minn.**

Barometer of Mid-Continent Refinery Market—Week Ending June 14

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, from Reports Made by 93 Plants to National Petroleum News


Millions of Gallons
Millions of Gallons
Stocks of Fuel Oil at Mid-Continent Refineries
Price of 24-26 Fuel Oil (Group 3) Cents Per Gallon
.90 Cts.
.80 Cts.
.70 Cts.
.60 Cts.
Production
Shipments
Shaded Area Shows Decrease in Stocks
Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1928
1929

California Refinery Market

Gasoline Stocks Heavy; Prices Waver

LOS ANGELES, June 17

THE petroleum market in California last week was in a turbulent state. No export sales were reported and few open market tank car sales were made, the movement being almost entirely on contracts over a period.

Agitation and worry, both, were evidenced by local marketing officials as the usual peak season for shipments slipped quickly by and it appeared that high tankage rates and low gasoline prices on the Eastern Seaboard would prevent any appreciable exportation of California petroleum products.

Receipt of California oil at Atlantic and Gulf Coast ports for May showed a daily average decrease of 2,300 barrels under the receipts for April, and shipments fell from 509,000 barrels for week ended May 25 to 312,000 barrels for week ended June 1. This 312,000 barrels was all gasoline shipped to New York and Baltimore.

Several shippers expect either a drop in the quoted price of California gasoline or an increase in Atlantic Coast prices. The former viewpoint is shared by the majority, as inquiries have been on the increase lately, indicating that buyers are awaiting only a favorable price from local sellers.

Tanker rates, which have varied from $1.00 to $1.05 during the past few weeks, are expected to exceed $1.25 toward the end of the summer unless some of the accumulated stocks on the Pacific Coast are relieved before that time.

General inactivity in the gasoline tank car market prevailed, with reports of some refiners shaving last week's quotations.

Several cars were reported sold at 9 cents for movement to a point within the state, without tax. Prices quoted for last week for similar shipments ranged from 9.50 to 10.50 cents, tax excluded.

One independent submitted a bid of 9 cents for 25 cars of gasoline destination to be out of the state, but as he was competing with Mid-Continent bidders who had a slight edge on freight rates he failed to secure the business.

Natural gasoline continued very active with the price ranging from 9 to 10 cents, tax excluded. The small amount of this commodity available in the open market has caused independents who needed it for blending purposes to bid the price up so that it is above straight-run goods.

Remaining refinery products showed little change from those quoted last week.

The local retail gasoline situation continued on an even trend although several marketers reported that they expected an advance in the retail price of gasoline from the present 19.50 cents to 20.50 cents. This is what it was selling for before the gasoline war, that began in March and is only now drawing to a close.

Pennsylvania Market

Cylinder Stocks Ease Off

CLEVELAND, June 17.—Western Pennsylvania markets were generally quiet last week. Little activity was reported in any section of the market. Although actual changes were few, the tendency of prices for most commodities was downward.

Bright stocks and steam refined stocks were the only products to show any marked recessions in price. Despite a fairly steady demand for the former, quotations for No. 8 color oil dropped off another cent per gallon to 53 cents. Several manufacturers were asking 55 cents for this grade on June 17 but at least two sellers were offering fair sized lots at 53 cents, one indicating he might be willing to shade this price.

Dark, No. 6-6½ color diluted, bright stock, was offered rather sparingly at 51 to 52 cents.

Outstanding feature of the steam refined market was a further drop of 1 cent per gallon in price for 600. This oil was freely available at 31 cents a gallon June 17. This compares with a high for the year of 37 cents, at which figure one large refiner reported selling his June output late in May.

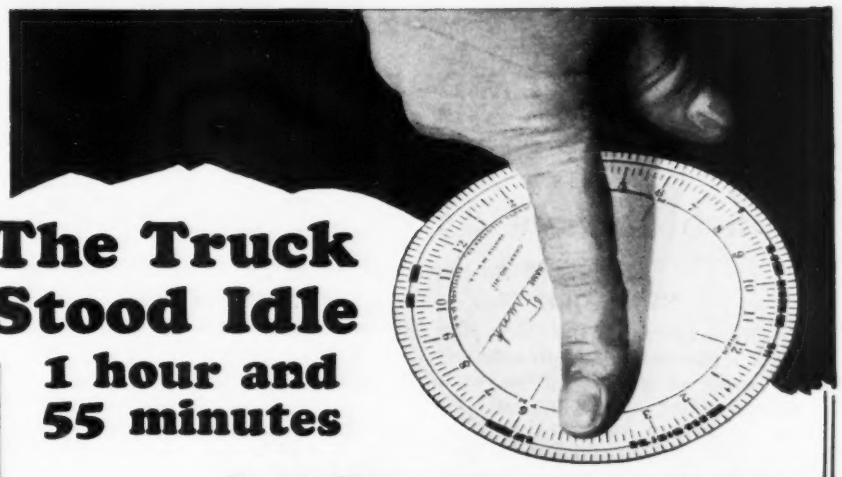
Other grades of steam refined stock showed little change in price from a week ago. Limited quantity of 650 steam refined offered kept the price for this grade from slipping proportionately with 600. It was offered in some quarters at 38.50 cents although most sellers were asking 38 cents and higher.

Demand for gasoline was very quiet last week. Several refiners reported June 17 that orders were coming in better as a result of the favorable weather but as yet they were not sufficient to stimulate any advance in prices.

U. S. Motor gasoline for spot shipment was available throughout last week at 10.25 cents. Some shading of this price was reported. On the other hand there were some refiners who were asking as high as 11 cents both for spot shipment and for delivery over the balance of June.

Kerosene prices eased off about 0.125-cent. To the car unloader, 6.625 cents was the best price reported made for 45 water white. Several refiners reported the call for kerosene was much better than it had been since the early part of May.

Demand for fuel oil from industrial users was steady, but there was a marked falling off in demand from refiners for cracking stock, which doubtless accounted for the further recession in prices. Fuel oil, 36-40 gravity, was offered as low as 4.75 cents in some districts and sellers reported orders at this price were few.



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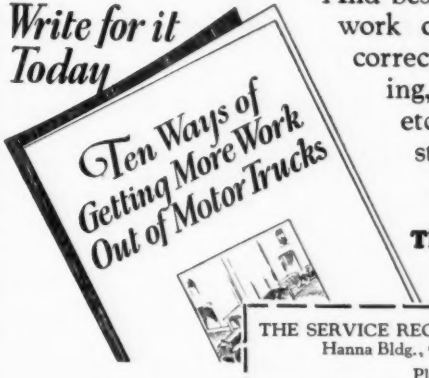

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Gulf Export Market

French Buyers Active; Prices Steady

Staff Special
NEW YORK, June 15

FRENCH buyers during the past week purchased approximately 81,000 barrels of gasoline from eastern sellers, after being out of the market for nearly two weeks. The goods moved at prices which have been in effect for the past several weeks.

The inquiries came into the market June 12 and the sales were reported closed two days later. One cargo was for approximately 30,000 barrels of 64-66, 375 e.p. gasoline and the other for approximately 50,000 barrels of U. S. Motor and 64-66, 375 e.p. gasoline. Both were for shipment early in August.

A third inquiry was reported in the market June 12, for approximately 50,000 barrels of 64-66, 375 e.p. gasoline which was still open June 15. It was from a French account and specified shipment early in August.

Prices on all commodities continued unchanged. There was still talk among the trade of higher prices which have been expected for several weeks.

Heavy oils were reported moving in a fair way against contracts. An inquiry for 28-32 gas oil, between 50,000 and 60,000 barrels, for shipment next month, which came into the market early in the week, was still open June 15.

The domestic market at the Gulf has likewise been unchanged although there has been some talk of higher prices there for U. S. Motor. The market was rather inactive during the past week with little occasion for quotations. However, one or two sellers whose ideas of the market have been 9 to 9.50 cents, indicated they probably would ask more than the lower figure if any business came in. Both said they were not pushing sales.

New York Domestic Market

Gasoline Steady Despite Slow Movement

Staff Special
NEW YORK, June 15

PRICES on all commodities were changed in eastern markets during the past week. Demand for both gasoline and kerosene has been slow, although prices on the former were well maintained. Some shading of 8 cents for kerosene was reported, but the movement has not been great enough to be considered a factor in the market.

The price for gasoline has been 10 cents at all seaboard points except where quotations were made on a delivered basis. There has been only one report of shading and that only on a small amount of business. The seller reported he had taken care of an old customer "slightly under 10 cents" but that he would not make the concession to any one else.

Gasoline shipments have been reported fair in one or two instances but the majority of sellers claim they are running behind in comparison with the first two weeks in May, and also with June of last year. Jobbers bought heavily last month when prices were low and many of them still have a fair sized supply in storage. As a result they have bought little or nothing on the open market and a good many refiners claim they have not been taking out nearly the limit of their contracts. One refiner said his shipments were approximately 25 per cent lower the past week than they were during a corresponding period in May.

Refiners are rather optimistic, however, as prices are fairly steady in other districts and many are expecting an advance in tank wagon prices in the S. O. New Jersey's territory. That made by the Atlantic Refining Co. in Pennsylvania and Delaware has led several to believe that changes by other eastern companies will be made in the near future.

The movement of California gasoline has been only fair but the prices of 10 to 10.50 cents at New York and 10 cents at Philadelphia and Baltimore were unchanged. One seller who had some goods delayed while in transit, said he was able to take care of his regular trade only, as his stocks were low at present. He said he had received a normal number of spot inquiries.

Wax Market

Scale Active at Lower Prices

NEW YORK, June 15.—The downward trend of wax prices which started several weeks ago, was still in evidence during the past week. Both white and yellow crude scale were quoted lower, with little change in fully refined waxes.

There were a number of sales reported, the largest being from two Mid-Continent companies to an Eastern dealer. The sale was said to have totalled 700 tons of white crude scale, part of the purchase having been made the week before, at 2.75 cents delivered to New Orleans.

Another sale of 100 tons of 122-124 A.m.p. for prompt shipment to England, was made at 2.80 cents, New York. The dealer who made the sale reported he had made two different purchases of yellow crude scale at 2.625 cents. A refiner sold 300 tons of white crude scale also for shipment to England, at 2.80 cents, the goods to move promptly. A domestic buyer purchased 150 tons of white crude scale for shipment over the next three months at 2.625 cents.

The sales of yellow crude scale were small and quotations largely governed prices. The only change in fully refined goods was on 123-125 A.m.p. goods. Quotations for this grade ranged from 3.875 to 4.125 cents as compared with 4 to 4.25 cents a week ago.

While these prices were in effect at the close of the week there was an unconfirmed report of some white scale that had moved lower. A refiner said he had heard of a sale made of 250 tons, half for prompt and the remainder over July, which figured about 2.60 cents at New York.

Most sellers reported they were receiving numerous inquiries from abroad but the bids were considerably under prices which refiners were willing to take. With one or two exceptions there were no quotations being made for other than shipment within the next two months. Better prices are expected the latter part of July or early in August.

Skinner's 20th Manual Out

LONDON, June 17.—The twentieth annual edition of what is known as Skinner's Manual has been put out by Walter E. Skinner, 15 Dowgate Hill, Cannon St., London. It is called the "Oil and Petroleum Year Book."

The book has 430 pages of facts on 555 English and foreign oil companies, including producers, refiners, carriers, and oil finance companies operating in all parts of the world, and lists the directors and officials of these companies, and their addresses.

End of Litigation on Red Hat in Sight

CHICAGO, June 15.—Official notice has been received by the Chicago office of the Independent Oil Men of America that the organization's application for registration of the trade mark "Red Hat" has been passed for publication. Certificates of registration may be issued by the Commissioner of Patents if no opposition is filed within 30 days after the publication of the design.

The Red Hat trade mark covers two designs, one for gasoline and one for motor oil, sold by the I.O.M.A. If the trade mark is registered without opposition it will end a struggle on the part of the association that has continued over a period of five years. When application was first made to the patent office, the trade mark was opposed by Standard Oil Co. of Indiana, charging that it conflicted with the trade mark "Red Crown."

Million Gas Tax Folders Sent Out by A.P.I.

NEW YORK, June 15.—Circulation of the American Petroleum Institute's series of folders designed to call the attention of the motoring public to the menace of steadily increasing gasoline taxes has passed the 1,000,000 mark. Companies marketing petroleum products through filling stations in virtually every section of the country now have on hand, or have ordered, copies of the folders to hand to motorists at their filling stations or through the mail.

The folders also have been placed with the National Automobile Dealers Association, the American Motorists Association and similar organizations for distribution to their membership, and it is expected that within a few weeks the informative pamphlets will be read by motorists in every state in the Union.

Letters commending the Institute on the folders have been received in quantity, while the number of editorials stressing the danger of rising gasoline tax rates and diversion of the revenue, the principal points mentioned in the folders, have appeared in hundreds of magazines and daily and weekly newspapers. Trade press publications, especially those of the petroleum and automotive industries, have given considerable space to the subject, as have also the magazines published by automobile clubs.

The Institute has offered to furnish interested companies and organizations with a supply of the folders at cost price.

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WE have been building Dayton Air Compressors for years; we have sold them in every section of this country and in practically every country in the world; side by side with every other make they have won their spurs. Sturdy, efficient, properly priced, low in upkeep cost, they have proved their worth wherever used.

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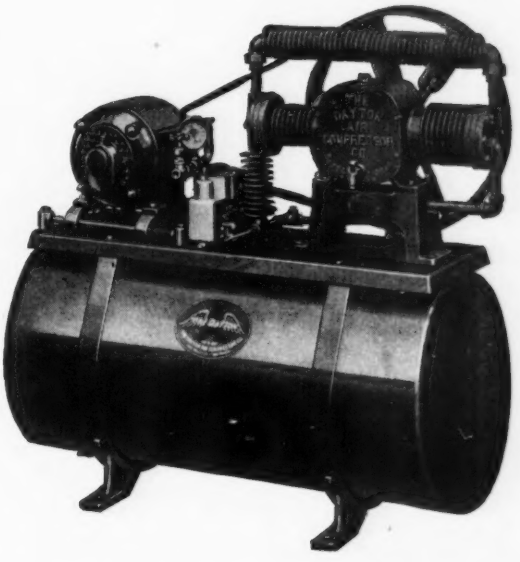

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The cash customer buys gas and oil where he pleases, but the coupon book customer concentrates his purchases in your stations. He looks for your sign—rarely buys competitive products. He buys in larger quantities.
Sell him a coupon book and reap the profit from these steady, bigger-buying customers.
Write us for complete information, samples and prices. *Accuracy since 1888.*

ALLISON COUPON COMPANY
INDIANAPOLIS, INDIANA

Complete Seaboard Market

(Export Markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the whole year)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of quotations.)

U. S. MOTOR GASOLINE	June 17	June 10	June 3
New York harbor	10.00	10.00	9.00 –10.00
Portland district	*12.25	*12.25	*12.00
Boston district	*11.75	*11.75	*11.50
Providence district	*11.75	*11.75	*11.50
Philadelphia district	10.00	10.00	10.00
Baltimore district	10.00	10.00	10.00
Norfolk district	10.00	10.00	10.00
Charleston district	10.00	10.00	10.00
Savannah district	10.00	10.00	10.00
Jacksonville district	10.00	10.00	10.00
CALIFORNIA, U. S. MOTOR GASOLINE			
New York harbor	10.00 –10.50	10.00 –10.50	10.00 –10.50
Philadelphia district	10.00	10.00	10.00
Baltimore district	10.00	10.00	10.00
WATER WHITE KEROSENE			
New York harbor	8.00	8.00	8.00
Philadelphia district	8.00	8.00	8.00
Baltimore district	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
GAS OIL: 28-34 Gravity			
New York harbor	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
Boston district	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
FURNACE OIL: 36-40 Gravity			
New York harbor	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
Boston district	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
GRADE C BUNKER OIL†			
New York harbor	$1.05	$1.05	$1.05
Boston district	$1.05	$1.05	$1.05
DIESEL OIL			
New York harbor	$2.00 –$2.10	$2.00 –$2.10	$2.00 –$2.10
MEDICINAL OILS, RUSSIAN			
885-890 s.g. 325-330 vis.	$0.75 – 0.80	$0.75 – 0.80	$0.75 – 0.80
870-875 s.g. 150-155 vis.	$0.65 – 0.70	$0.65 – 0.70	$0.65 – 0.70

Note: Above gasoline prices do not include inspection tax levied in some states
*Minimum delivered. **Delivered prices. †Lighterage 5c per bbl. additional

New York Export Market

(Lubricating oils are per gal. in bbls.)

	June 17	June 10	June 3
CYLINDER OILS (Pennsylvania Products)			
Bright stock, dark	58.00 –60.00	*60.00 –62.00	*58.00 –62.00
600 D filtered	47.00 –49.00	*47.00 –49.00	No quotations
600 Warren E filtered	45.00 –46.00	*46.00 –47.00	*45.00 –47.00
600 s.r. unfiltered	40.00 –41.00	*41.00 –43.00	*42.00 –43.00
550 s.r., unfiltered	46.00 –48.00	*46.00 –48.00	*47.00 –48.00
600 flash, s.r.	48.00 –50.00	*48.00 –50.00	*50.00 –52.00
630 flash, s.r.	51.00 –52.00	*52.00 –55.00	*53.00 –54.00
*Nominal			
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	20.00 –21.00	20.00 –21.00	20.00 –21.00
250 vis. No. 6 color	18.00 –20.00	18.00 –20.00	18.00 –20.00
200 vis. No. 6 color	16.00 –18.00	16.00 –18.00	16.00 –18.00
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¾ color	23.50	23.50	23.50
180 vis. No. 3¼ color	18.50 –20.50	18.50 –20.50	18.50 –20.50
100 vis. No. 2¼ color	16.00 –17.00	16.00 –17.00	16.00 –17.00
MOTOR OILS (Vis. 100°)			
600 vis. No. 7 color	33.00	33.00	33.00
500 vis. No. 6½ color	31.00	31.00	31.00
400 vis. No. 7¼ color	30.00	30.00	30.00
300 vis. No. 6 color	25.00 –27.00	25.00 –27.00	25.00 –27.00
200 vis. No. 6 color	24.00	24.00	24.00
MEDICINAL OILS			
875-885 s.g.	$0.80	$0.80	$0.80
865-870 s.g.	$0.70	$0.70	$0.70
WAXES (In cents per pound, f.a.s. carload lots)			
WHITE CRUDE SCALE (In barrels)			
122-124 A.m.p.	2.625– 2.875	2.875	2.875– 3.00
124-126 A.m.p.	2.625– 2.875	2.875	2.875– 3.00
FULLY REFINED (In burlap bags)			
123-125 A.m.p. Phila.	3.875– 4.125	4.00 – 4.25	4.00 – 4.25
125-127 A.m.p.	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
128-130 A.m.p.	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50
130-132 A.m.p.	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75
133-135 A.m.p.	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
135-137 A.m.p.	6.50	6.50	6.50
YELLOW CRUDE SCALE			
124-126 A.m.p.	2.50 – 2.625	2.625– 2.75	2.875

Gulf Export Market

(Prices are f. o. b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. or more unless otherwise noted and for export shipment only).

GASOLINE	June 17	June 10	June 3
U. S. Motor	8.50	8.50	8.50
60-62 400 e.p.	9.50	9.50	9.50
61-63, 390 e.p.	9.75	9.75	9.75
64-66, 375 e.p.	10.00	10.00	10.00
U. S. Motor, cases (cargoes)	$1.75	$1.75	$1.75
64-66, cases (cargoes)	$1.90	$1.90	$1.90
KEROSENE			75
44 water white	8.75	8.75	8.75
41-43 prime white	7.75	7.75	7.75
Water white, cases (cargoes)	$1.80	$1.80	$1.80
Prime white, cases (cargoes)	$1.70	$1.70	$1.70
DOMESTIC GAS & BUNKER OILS			
*26-30 translucent gas oil	4.00	4.00	4.00
*30 plus translucent gas oil	4.00 – 4.125	4.00 – 4.125	4.00 – 4.125
Grade C bunker oil	$0.95 –$1.00	$0.95 –$1.00	$0.95 –$1.00
Grade C bunker oil, cargoes	$0.75 – 0.85	$0.75 – 0.85	$0.75 – 0.85
*Less than ½ of 1% sulfur.			
MEXICAN CRUDE AND BUNKER OILS (F. O. B. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid	$0.60 –$0.65	$0.60 –$0.65	$0.60 –$0.65
Grade C bunker oil, for bunkering purposes, taxes paid	$0.95 –$1.00	$0.95 –$1.00	$0.95 –$1.00
SOUTH TEXAS LUBR CATING OILS, (Viscosity at 100° F.(cold test 0) (Tanker, f. o. b. Houston)			
100 vis. No. 2 unfiltered pale	6.50 – 6.75	6.50 – 6.75	6.50 – 6.75
200 vis. No. 3 unfiltered pale	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
300 vis. No. 3 unfiltered pale	9.50 –10.50	9.50 –10.50	9.50 –10.50
500 vis. No. 3½ unfiltered pale	11.00 –12.00	11.00 –12.00	11.00 –12.00
750 vis. No. 4 unfiltered pale	13.50 –14.00	13.50 –14.00	13.50 –14.00
1200 vis. No. 5 unfiltered pale	16.50 –17.00	16.50 –17.00	16.50 –17.00
200 vis. No. 5-6 red oil	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
300 vis. No. 5-6 red oil	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
500 vis. No. 5-6 red oil	10.00 –10.50	10.00 –10.50	10.00 –10.50
750 vis. No. 5-6 red oil	12.00 –12.50	12.00 –12.50	12.00 –12.50
1200 vis. No. 5-6 red oil	16.50 –17.00	16.50 –17.00	16.50 –17.00

Gulf Domestic Market

(Prices are f.o.b. Gulf oil terminals in Texas and Louisiana in shipments of 20,000 bbls. or more, representing sellers' opinions, for domestic shipment only).

	June 17	June 10	June 3
U. S. Motor gasoline	9.00 – 9.50	9.00 – 9.50	8.50 – 9.00
41-43 w.w. kerosene	7.25	7.25	7.25
*26-32 translucent gas oil	4.00	4.00	4.00
*Less than ½ of 1% sulfur.			

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	June 17	June 10	June 3
Gasoline, U. S. Motor, 53-55 Gravity	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
Gasoline, U. S. Motor-blends and special cuts	7.50 –10.00	7.50 –10.00	7.50 –10.00
Gas Oil, 30-34, per barrel	$0.95 –$1.05	$0.95 –$1.05	$0.95 –$1.05
Diesel Oil, 27 plus, per barrel	$0.875–$1.00	$0.875–$1.00	$0.875–$1.00
Bunker oil, 14-18, per barrel	$0.70 –$0.85	$0.70 –$0.85	$0.70 –$0.85
Fuel oil, 14-18 per barrel	$0.60 –$0.85	$0.60 –$0.85	$0.60 –$0.85
Kerosene, 38-40 w.w., 125-150 flash, per gal.	5.50 – 6.25	5.50 – 6.25	5.50 – 6.25
Cased Goods			
Gasoline, U. S. Motor	$1.75 –$1.85	$1.75 –$1.85	$1.75 –$1.85
Kerosene, 38-40 w.w., 125, 150 flash	$1.45 –$1.50	$1.45 –$1.50	$1.45 –$1.50

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to American ports, cents per barrel.)

	June 17	
	Crude &/or Fuel	Refined Oil &/or Spirits
Calif. to U. K or Continental ports*	30–32	33–35
Gulf to U. K. or Continental ports*	19–20	23/6
North Atlantic to U. K. or Continental ports*	17–18	21/6
Calif. to North Atlantic ports (not E. of N. Y.)	65–70	$1.03
Gulf to North Atlantic ports (not E. of N. Y.)**	27–29	38–40

*Continental ports in the range between Bordeaux and Hamburg, both inclusive.
**For Venezuela loading 1c per bbl. additional. For Tampico loading 4c per bbl. additional.

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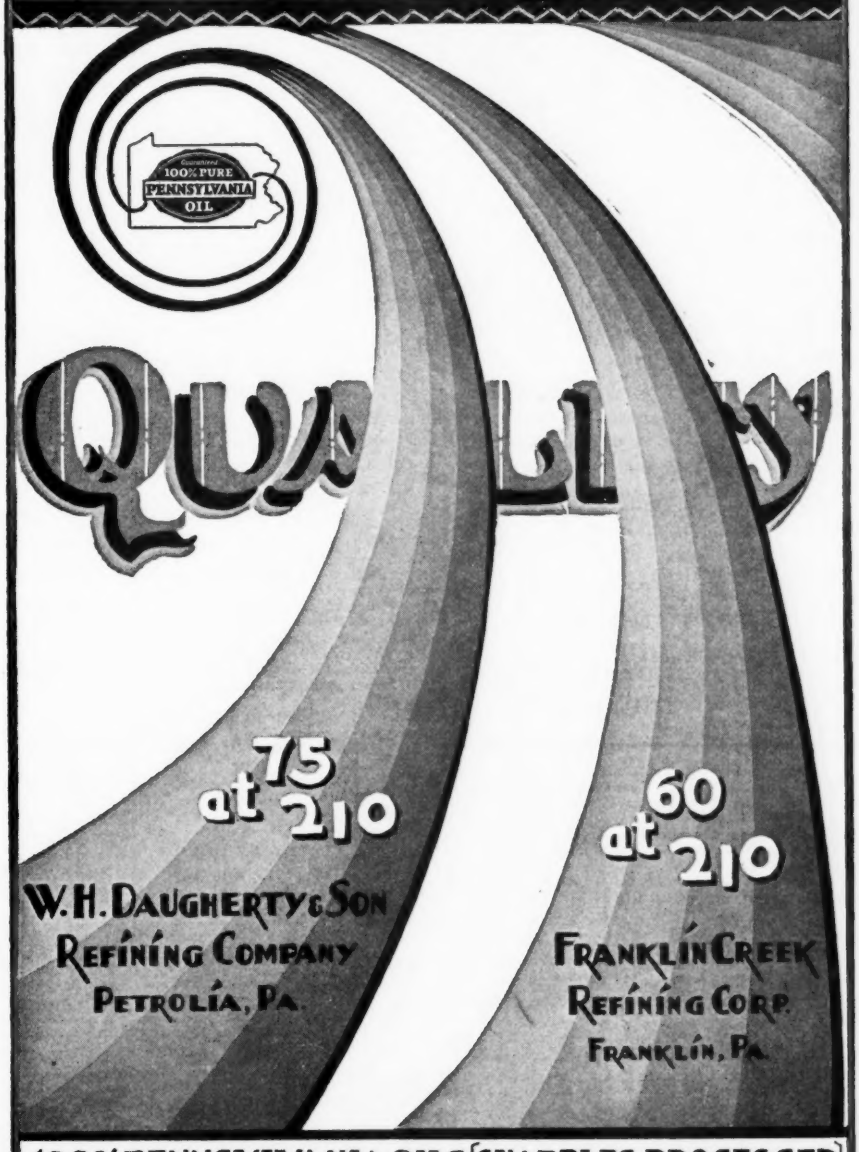

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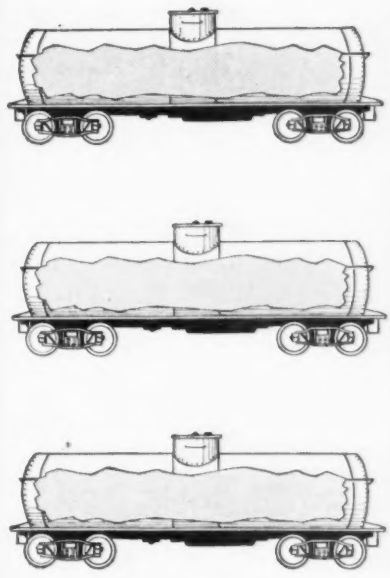

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Uniformity is easy with

DYKEM GASOLINE COLORS

Several Shades of

RED BLUE
GREEN PURPLE
ORANGE

Samples of shades you prefer and prices gladly submitted.

DYESTUFFS & CHEMICALS, INCORPORATED.

11th and Monroe Sts., ST. LOUIS, MO.

Tank Wagon Service Station Markets for Gasoline and Kerosene

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

These Prices in Effect June 17, 1929, as Posted by Principal Marketing Companies

S.O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Atlantic City, N. J.	12	2	14	18	13
Newark, N. J.	14	2	16	20	13
Annapolis, Md.	14	4	18	22	13
Baltimore, Md.	14	4	18	22	12
Cumberland, Md.	14	4	18	22	13
Washington, D. C.	14	2	16	20	12
Danville, Va.	14	5	19	23	12
Norfolk, Va.	14	5	19	23	13
Richmond, Va.	14	5	19	23	13
Roanoke, Va.	14	5	19	23	13
Petersburg, Va.	14	5	19	23	13
Charleston, W. Va.	14	4	18	22	13
Keyser, W. Va.	14	4	18	22	13
Parkersburg, W. Va.	14	4	18	20	13
Wheeling, W. Va.	14	4	18	22	13
Charlotte, N. C.	14	5	19	23	13
Hickory, N. C.	14	5	19	23	13
Mt. Airy, N. C.	14	5	19	23	13
Salisbury, N. C.	13	5	18	20	13
Charleston, S. C.	14	6	20	24	13
Columbia, S. C.	14	6	20	24	13

CONTINENTAL OIL

Denver, Colo.	14	4	18	21	15.5
Pueblo, Colo.	14	4	18	21	15.5
Grand Junc., Colo.	18.5	4	22.5	25.5	19
Casper, Wyo.	17	4	21	24	14
Cheyenne, Wyo.	18	4	22	25	15.5
Butte, Mont.	20.5	5	25.5	28.5	20
Helena, Mont.	20.5	5	25.5	28.5	20
Salt Lake City, Utah	18.5	3½	22	25	17
Boise, Ida.	20.5	4	24.5	27.5	19
Twin Falls, Ida.	20.5	4	24.5	27.5	19
Albuquerque, N. M.	16	5	21	24	17

S. O. CALIFORNIA

Phoenix, Ariz.	14	4	18	22	21.5
Los Angeles, Cal.	15.5	3	18.5	22.5	15.5
Fresno, Cal.	16	3	19	23	16.5
San Francisco, Cal.	16	3	19	23	15.5
Reno, Nev.	20	4	24	28	19
Portland, Ore.	16.5	3	19.5	23.5	16.5
Seattle, Wash.	16.5	2	18.5	22.5	16.5
Spokane, Wash.	20.5	2	22.5	26.5	20.5
Tacoma, Wash.	16.5	2	18.5	22.5	16.5

Note: 3c per gal. discount to dealers off t.w. price thru S. O. California territory.

S. O. LOUISIANA

Little Rock, Ark.	15	5	20	24	13
Alexandria, La.	14	4	18	22	†16
Baton Rouge, La.	13	4	17	21	†14.5
Lake Charles, La.	††15.5	4	††19.5	††23.5	†16
New Orleans, La.	*14.5	4	*18.5	22.5	†16
Shreveport, La.	14.5	4	18.5	22.5	†15
Lafayette, La.	**15	4	**19	**23	†14
Bristol, Tenn.	17	5	22	25	14
Chattanooga, Tenn.	16.5	5	21.5	25.5	16
Knoxville, Tenn.	17	5	22	26	16
Nashville, Tenn.	14	5	19	23	16
Memphis, Tenn.	13	5	18	22	12.5

*New Orleans gasoline prices include 1c parish tax in addition to 4c state tax, and kerosene prices include 1c state tax and 1c parish tax.

†Kerosene price in Louisiana includes 1c state tax.

**Lafayette gasoline prices include 1c parish tax in addition to 4c state tax.

††Lake Charles gasoline prices include 1c parish tax.

S. O. KENTUCKY

Ashland, Ky.	13	5	18	19	15.5
Catlettsburg, Ky.	13	5	18	19	15.5
Lexington, Ky.	16	5	21	23	15.5
Louisville, Ky.	16	5	21	23	15
Covington, Ky.	16	5	21	22	15.5
Clarksdale, Miss.	17	5	22	24	12.5
Gulfport, Miss.††	18.5	5	23.5	25.5	14
Jackson, Miss.	17	5	22	24	13
Natchez, Miss.	16.5	5	21.5	23.5	14
Vicksburg, Miss.	16.5	5	21.5	23.5	14
Birmingham, Ala.	18	4	22	24	16
Mobile, Ala.‡	18	4	22	24	15
Montgomery, Ala.*	19	4	23	25	16.5
Atlanta, Ga.	18	4	22	24	†16.5
Augusta, Ga.	18	4	22	24	†15.5
Macon, Ga.	18	4	22	24	†16.5
Savannah, Ga.	17	4	21	23	†15.5
Jacksonville, Fla.	17	5	22	24	14.5
Miami, Fla.	18	5	23	25	15.5
Tampa, Fla.	17	5	22	24	14.5
Pensacola, Fla.**	18	5	23	25	14.5

Note: Net price to dealers is 2c under posted t.w. price thru S. O. Kentucky territory.

Latest Changes In Tank Wagon Prices

Gasoline Changes

Atlantic Refining—T.w. and s.s. gasoline up 1c, through Pennsylvania and Delaware, to 20c and 22c respectively including 3c tax in both states, June 14. Erie and Williamsport are unchanged. Last previous change was a 1c advance on **April 11.**

S. O. Ohio—T.w. and s.s. gasoline up 1c, Columbus, to statewide schedule of 20c and 21c respectively, **June 14.**

Canada—T.w. and s.s. gasoline up 1c, Quebec City, to 27.5 and 31c respectively, including 5c tax, **June 12.**

Kerosene Changes

Canada—Kerosene up 1c, Fort William, Winnipeg, Regina, Calgary and Edmonton, **May 22.**

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included. ‡Mobile gasoline prices include 1c city tax.

†Georgia kerosene prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola, which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

S. O. NEBRASKA

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Omaha, Neb.	16.25	4	20.25	22.25	13.25
McCook	17.75	4	21.75	23.75	14.75
Norfolk	16.75	4	20.75	22.75	13.75
North Platte	17.75	4	21.75	23.75	14.50
Scottsbluff	17.75	4	21.75	23.75	14.25

S. O. INDIANA

Chicago, Ill.	16.0	0	16.0	17.0	13
Decatur, Ill.	16.2	0	16.2	17.2	13.1
E. St. Louis, Ill.	15.4	0	15.4	16.4	12.2
Joliet, Ill.	16.4	0	16.4	17.4	13.3
Peoria, Ill.	16.2	0	16.2	17.2	13.1
Quincy, Ill.	16.2	0	16.2	17.2	12.9
Indianapolis, Ind.	16.2	4	20.2	21.2	14.2
Evansville, Ind.	16	4	20	21	14
South Bend, Ind.	16.4	4	20.4	21.4	14.4
Detroit, Mich.	16.8	3	19.8	20.8	14.7
Grand Rapids, Mich.	16.7	3	19.7	20.7	14.6
Saginaw, Mich.	16.9	3	19.9	20.9	14.8
Green Bay, Wisc.	16.6	2	18.6	19.6	13.4
Madison, Wisc.	16.3	2	18.3	19.3	13.1
Milwaukee, Wisc.	16.1	2	18.1	19.1	12.9
La Crosse, Wisc.	17.2	2	19.2	20.2	14
Minneapolis, Minn.	17.2	3	20.2	21.2	13.9
Duluth, Minn.	17.5		20.5	21.5	13.9
Mankato, Minn.	17.1	3	20.1	21.1	13.7
Des Moines, Ia.	16.5	3	19.5	20.5	13.3
Davenport, Ia.	16.5	3	19.5	20.5	13.3
Sioux City, Ia.	16.1	3	19.1	20.1	12.9
Mason City, Ia.	16.5	3	19.5	20.5	13.3
St. Louis, Mo.	*15.9	2	17.9	18.9	12.3
Kansas City, Mo.	†16.9	2	18.9	19.9	11.6
St. Joseph, Mo.	†16.5	2	18.5	19.5	12.2
Fargo, N. D.	18.9	2	20.9	21.9	15.9
Grand Forks, N. D.	19.2	2	21.2	22.2	16.2
Minot, N. D.	18.9	2	20.9	21.9	15.9
Pierre, S. D.	17	4	21	22	14.4
Huron, S. D.	17.3	4	21.3	22.3	14.7
Wichita, Kans.	14.8	3	17.8	18.8	11.8
Bartlesville, Okla.	14.5	3	17.5	18.5	11.5

S. O. Indiana's quantity contract price schedule thru territory except Chicago on tank truck deliveries of gasoline, figured from the service station price, is 2c for 500 gals. or more a month; 2½c for 2000 gals. or more a month and 3c for 6000 gals. or more a month.

In Chicago and vicinity, these discounts apply: Over 500 gals. per month, 2c per gal. off service station price; over 1,000 gals. per month, 4c per gal. off service station price.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. OHIO

Bryan	*13	4	*17	17	14
Lima and Hamilton.	**14	4	**18	18	14
††13 Competitive Points	††15	4	††19	19	14
†At 6 Competitive Points	*15	4	*19	20	14
Elsewhere in Ohio.	*16	4	*20	21	14

†These 6 points are: Marion, Hicksville, Celina, Arlington, Mortimer and Nevada, O.

*Dealers and commercial accounts get 2c per gal off t. w. price.

††These 13 points are: Findlay, Washington C. H., Arcadia, Perrysburg, Fostoria, Wapakoneta, Urbana, Jamestown, Xenia, St. Paris, Ada, Chillicothe and Piqua. Discount to dealers is 3c per gal. off t.w. price.

**Discount to dealers and commercial consumers is 3c per gal. off t.w. price.

MAGNOLIA PETROLEUM

Muskogee, Okla.	12	3	15	18	13
Oklahoma City.	12	3	15	18	10
Tulsa, Okla.	10	3	13	17	10
Fort Smith, Ark.†	12	†3	15	19	12
Little Rock, Ark.	15	5	20	24	13
Texarkana, Ark.*	13	*2	15	19	13
Dallas, Tex.	11	2	13	17	13
Fort Worth, Tex.	11	2	13	16	12
Houston, Tex.	12	2	14	18	13
San Antonio, Tex.	11	2	13	17	11
El Paso, Tex.	15	2	17	20	16

*Within city of Texarkana, the state tax on gasoline is 2c per gal. conforming with the Texas state tax. In this district outside of the city the 5c Arkansas tax applies.

†Within city of Fort Smith, Oklahoma tax of 3c applies. In this district outside of the city, the 5c Arkansas tax applies.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

New York City	17	2	19	*21	15
Albany, N. Y.	15	2	17	19	15
Buffalo, N. Y.	15	2	17	19	14
Rochester, N. Y.	15	2	17	19	13
Syracuse, N. Y.	15	2	17	19	12
Boston, Mass.	16	2	18	20	15
Augusta, Me.	16	4	20	22	15
Manchester, N. H.	16	4	20	22	15
Burlington, Vt.	16	4	20	22	13

Note: S. O. New York allows concessions of 1 to 2c per gal. to dealers under posted tank wagon prices.

*The Standard of New York does not operate stations in New York City. This figure is the retail price of a principal station operator in New York selling Socony gasoline.

ATLANTIC REFINING

Pittsburgh, Pa.	†17	*	†17	22	14
Philadelphia, Pa.	†17	*	†17	22	14
Allentown, Pa.	†17	*	†17	22	14
Erie, Pa.	†13	*	†13	18	14
Scranton, Pa.	†17	*	†17	22	14
Altoona, Pa.	†17	*	†17	22	14
Williamsport, Pa.	†16	*	†16	19	14

Above prices include these inspection fees on both gasoline and kerosene, per gallon: Alabama, 1/40c on gasoline, 1/2c kerosene; Arkansas, 1/20c on both Florida, 1/8c on both; Indiana, 2/25c on both; Kansas, 1/50c on both; Louisiana, 1/32c on gasoline, 1c on kerosene; Minnesota, 3/50c on both; Missouri, 1/50c on both; Nebraska, 3/50c to 1/2c on both; North Carolina, 1/4c on both; North Dakota, 1/20c on both; Oklahoma, 4/25c on both; South Carolina, 1/8c on both; South Dakota, 1/10c on both; Tennessee, 2/5c on gasoline and 1/2c on kerosene; Wisconsin, 3/50c on both.

Kerosene inspection fees only: Iowa, 13/100c; Michigan 1/5c to 4/5c per gal.

In Illinois, cities and villages have the power to appoint oil inspectors and fix inspection fees which is done in some instances. In some cases in the above states or other states there are local inspection fees.

Tank Wagon, Service Station Markets for Gasoline and Kerosene

Prices in Effect June 17, 1929

ATLANTIC REFINING

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Dover, Del.	†17	3	†20	22	14
Wilmington, Del.	†17	3	†20	22	14
Boston, Mass.	16	2	18	20	15
Springfield, Mass.	16	2	18	20	15
Worcester, Mass.	16	2	18	20	15
Fall River, Mass.	14	2	16	17	15
Providence, R. I.	14	2	16	17	15
Hartford, Conn.	16	2	18	20	14
New Haven, Conn.	16	2	18	20	15
Atlantic City, N. J.	16	2	18	20	13
Camden, N. J.	16	2	18	20	13
Trenton, N. J.	16	2	18	20	13
Annapolis, Md.	16	4	20	22	13
Baltimore, Md.	16	4	20	22	13
Hagerstown, Md.	16	4	20	22	13
Richmond, Va.	16	5	21	23	13
Wilmington, N. C.	16	4	20	22	13
Brunswick, Ga.	17	4	21	23	**16.5
Jacksonville, Fla.	17	5	22	24	14.5

*3-cent state tax is collected by retail dealer and paid by him directly to state.

†The Atlantic Refg Co. recognizes a 2c a gal. discount from its posted tank wagon market on sales to dealers for purposes of resale.

The company also recognizes a maximum discount of 2c per gallon to commercial accounts under contract for one year.

**Georgia kerosene prices include 1c state tax.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	15.7	17.2	19
Detroit	17.4	18.9	20.7
Kansas City	†15.9	†17.4	†19.2
Milwaukee	16.4	*19.9	*21.7
Minneapolis	*19.7	*21.2	*23
St. Louis	15.6	17.1	18.9
New York		17	23
Boston		19	23

*Includes 2c state tax. †Includes 1c city tax.

Petroleum Spirits

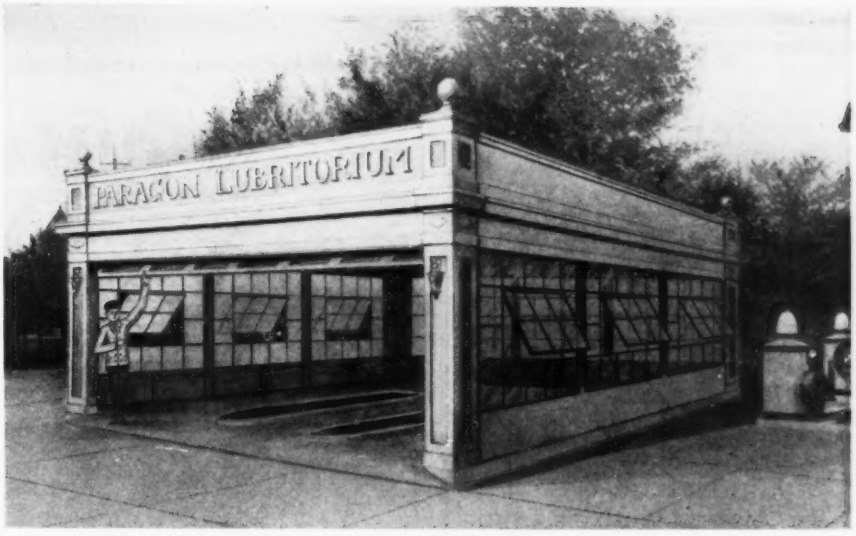
Tank Cars (Solvent)	
New York refineries	12.00
Philadelphia refineries	12.00
Tank Wagon or Steel Barrels	
New York City	17
New England	19
New Jersey	16
Pennsylvania	16–18

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

	Gasoline T.W.	Tax	T.W.	S.S	Oil T.W.
ONTARIO					
Toronto	20.5	5	25.5	29	21
Ottawa	14.5	5	19.5	23	21
Cochrane	25.5	5	30.5	..	26
Ft. William	23.5	5	28.5	32	23.5
MANITOBA					
Winnipeg	22.5	3	25.5	29	22.5
SASKATCHEWAN					
Regina	27	3	30	34	27
ALBERTA					
Edmonton	28.5	5	33.5	37	28.5
Calgary	24.5	5	29.5	33	24.5
BRITISH COLUMBIA					
Vancouver	23	3	26	30	24
QUEBEC					
Montreal	21.5	5	26.5	30	22
Quebec City	22.5	5	27.5	31	23
Three Rivers	22.5	5	27.5	31	23
NEW BRUNSWICK					
St. John	25	5	30	34	25
Moncton	25	5	30	34	25
NOVA SCOTIA					
Halifax	25	5	30	34	25
Sydney	25	5	30	34	25
PRINCE EDWARD ISLAND					
Charlottetown	25	5	30	34	25

Note: In districts surrounding these points 1c additional is added to city price.



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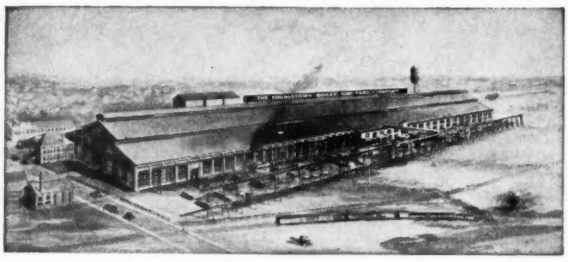

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Crude Oil Prices (in Effect June 17, 1929)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District)	$4.10
Bradford District Oil in National Transit Lines (Bradford District)	4.10
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	4.00
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	4.00
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	3.90
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	3.85
Cabell Grade in Eureka Pipe Lines (West Virginia)	1.65
Corning Grade in Buckeye Pipe Lines (Ohio)	1.90
Corning, O. heavy grade	1.80
Somerset Oil in Cumberland Pipe Lines (Kentucky)	1.80
Ragland Grade in Cumberland Pipe Lines (Kentucky)	$0.60

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines	$1.80

MICHIGAN

(Posted by Dixie Oil Co.)

Dundee (Muskegon)	$1.10

Traverse (Muskegon):

32-32.9	$1.25	37-37.9	$1.50
33-33.9	1.30	38-38.9	1.55
34-34.9	1.35	39-39.9	1.60
35-35.9	1.40	40-40.9	1.65
36-36.9	1.45	41-41.9	1.70

(Posted by Pure Oil Co.)

Midland, Midland County	$1.70

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective May 21, 1929

Wooster	$1.90	Princeton	$1.75
Lima	1.80	Illinois	1.75
Waterloo	1.20	Plymouth	1.28
Indiana	1.57	West Kentucky	1.83

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Petrolia	$2.20
Oil Springs	2.27

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective May 20, 1929

Below 25	$0.85	35-35.9	$1.40
25-25.9	0.90	36-36.9	1.45
26-26.9	0.95	37-37.9	1.50
27-27.9	1.00	38-38.9	1.55
28-28.9	1.05	39-39.9	1.60
29-29.9	1.10	40-40.9	1.65
30-30.9	1.15	41-41.9	1.70
31-31.9	1.20	42-42.9	1.75
32-32.9	1.25	43-43.9	1.80
33-33.9	1.30	44 and above	1.85
34-34.9	1.35		

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

May 20, 1929, same schedule as Prairie in above fields.

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

May 20, 1929, Magnolia posted in above fields and in Panola Co., same schedule as Prairie, except these grades:

Below 26	$0.70	29-29.9	$0.95
26-26.9	0.75	30-30.9	1.05
27-27.9	0.85	31-31.9	1.15
28-28.9	0.90		

May 20, 1929, Glasscock, Crane, Upton, Winkler, Howard and Mitchell Counties same prices as Humble's postings in West Texas which see:

Iatan district	$0.93
Corsicana heavy	0.80
Luling	0.90
Mirando	0.90

Carter Oil Co.

(Oklahoma and Kansas)

May 20, 1929, same schedule as Prairie except Carter does not post oil below 25.

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective May 20, 1929

Hutchinson and Carson Counties:

Below 32	$0.90	38-38.9	$1.25
32-32.9	0.95	39-39.9	1.30
33-33.9	1.00	40-40.9	1.35
34-34.9	1.05	41-41.9	1.40
35-35.9	1.10	42-42.9	1.45
36-36.9	1.15	43-43.9	1.50
37-37.9	1.20	44 and above	1.55

Wheeler County:

Below 30	$0.90	37-37.9	$1.30
30-30.9	0.95	38-38.9	1.35
31-31.9	1.00	39-39.9	1.40
32-32.9	1.05	40-40.9	1.45
33-33.9	1.10	41-41.9	1.50
34-34.9	1.15	42-42.9	1.55
35-35.9	1.20	43-43.9	1.60
36-36.9	1.25	44 and above	1.65

Gray County:

Below 29	$0.90	37-37.9	$1.35
29-29.9	0.95	38-38.9	1.40
30-30.9	1.00	39-39.9	1.45
31-31.9	1.05	40-40.9	1.50
32-32.9	1.10	41-41.9	1.55
33-33.9	1.15	42-42.9	1.60
34-34.9	1.20	43-43.9	1.65
35-35.9	1.25	44 and above	1.70
36-36.9	1.30		

Above prices met by The Texas Co. and Magnolia on May 20.

WEST TEXAS

Humble Oil & Refining Co.

Effective May 20, 1929

Winkler, Crane, Upton, Crockett, Howard and Pecos Counties, also Lea County, N. Mex.:

Below 25	$0.70	25-25.9	$0.74
26-26.9	0.78	32-32.9	$1.02
27-27.9	0.82	33-33.9	1.06
28-28.9	0.86	34-34.9	1.10
29-29.9	0.90	35-35.9	1.14
30-30.9	0.94	36 and above	1.18
31-31.9	0.98		

May 20, 1929, The Texas Co. posted same prices as Humble in Crane, Upton, Pecos and Winkler., and Magnolia in Crane, Upton, Winkler, Glasscock, Howard and Mitchell.

SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)

Effective May 20, 1929

Mirando	$0.90
Salt Flat	1.25

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado Crichton, De Soto and **Cotton Valley.

Effective May 22, 1929

Below 28	$1.00	36-36.9	$1.45
28-28.9	1.05	37-37.9	1.50
29-29.9	1.10	38-38.9	1.55
30-30.9	1.15	39-39.9	1.60
31-31.9	1.20	40-40.9	1.65
32-32.9	1.25	41-41.9	1.70
33-33.9	1.30	42-42.9	1.75
34-34.9	1.35	43-43.9	1.80
35-35.9	1.40	44 and above	1.85

**Cotton Valley, below 36, $0.85. Beginning with 36-36.9, same schedule as above.

Smackover, below 24	$0.85
do 24 and above	1.00
Bellevue	1.30
*Urania, La.	1.10
†East El Dorado	0.75

*Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

May 20, The Texas Co. same schedule in Louisiana as Standard, plus these grades: 24-24.9, $0.85; 25-25.9, $0.90; 26-26.9, $0.95; 27-27.9, $1.00.

May 22, Magnolia, Atlantic, Shreveport-Eldorado Pipe Line, Louisiana Oil, and Gulf Companies met Standard schedule in Louisiana-Arkansas fields.

STEPHENS, ARKANSAS

Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

Effective May 22, 1929

Below 28	$0.90	30-30.9	$1.02
28-28.9	0.94	31-31.9	1.06
29-29.9	0.98	32 and above	1.10

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective May 20, 1929

Grades A	$1.30	29-29.9	$1.30
Grades B:		30-30.9	1.33
Below 25	$1.15	31-31.9	1.36
25-25.9	1.18	32-32.9	1.39
26-26.9	1.21	33-33.9	1.42
27-27.9	1.24	34-34.9	1.45
28-28.9	1.27	35 and above	1.48

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling, Pierce Junction, Sugarland and Raccoon Bend. All other fields are Grades A only.

Asphalt Sales Down 2.3% in 1928

WASHINGTON, June 14.—A 6.2 per cent reduction in sales of paving asphalt, due chiefly to increased sales of other paving materials, led to a 2.3 per cent decrease in 1928 in the total sales of solid, semisolid, and liquid asphalt prepared from petroleum, according to statistics compiled by A. H. Redfield, of the United States Bureau of Mines, Department of Commerce.

On the other hand, sales of road oil increased 45.8 per cent in quantity from 297,110 short tons, or about 1,818,300 barrels, in 1927 to 433,255 tons, or 2,651,500 barrels, in 1928, and 22.8 per cent in value, from $3,129,520 in 1927 to $3,844,439 in 1928.

Prices of nearly all grades were lower in 1928 than in 1927. The average sales value per ton of all asphaltic products, including road oil, fell from $13.87 in 1927 to $12.50 in 1928.

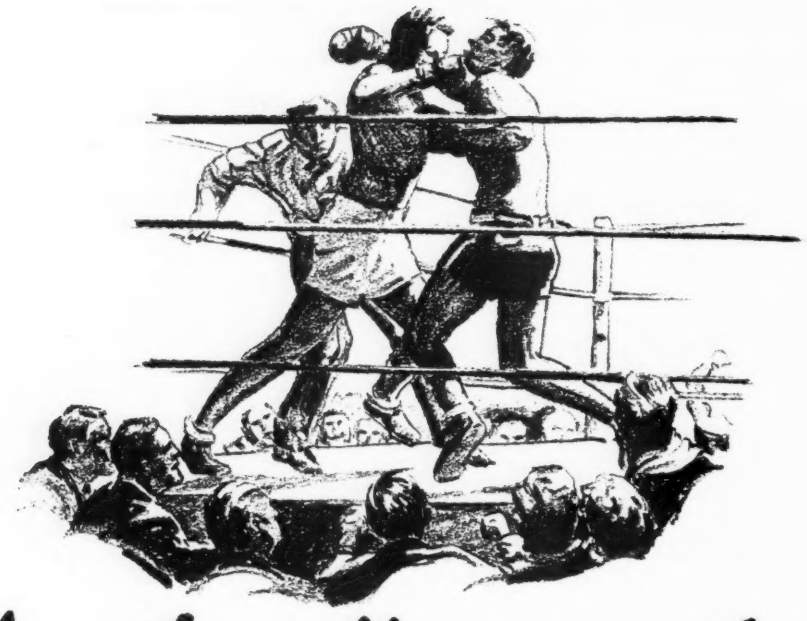
For the first time since 1921, refinery production of asphalt manufactured from petroleum decreased, from 3,817,539 short tons in 1927 to 3,542,941 tons in 1928. Substantial gains in the production of asphalt in the refineries of the Middle West and of California did not suffice to offset the lowered production of the Atlantic Coast and Gulf Coast refineries, which furnished 69.2 per cent of the national output.

Of the total refinery production in 1928, 2,156,172 short tons, or 60.9 per cent, was manufactured from crude oil imported from Venezuela, Mexico, and Colombia.

Refinery Engineer Joins Foster Wheeler Staff

NEW YORK, June 14.—M. J. Gavin, refinery engineer of the U. S. Bureau of Mines, headquartered at the San Francisco Office of the Bureau, has resigned to accept a position with the Foster Wheeler Corp. Mr. Gavin was in the employ of the Government for 11 years.

He also had charge of the design, construction, and operation of the Government's oil shale plant at Rifle, Colorado. Mr. Gavin is at present in the New York office of the Foster Wheeler Corp., but expects soon to return to California, where he will be in charge of the Los Angeles office of that company.



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Imperial Refineries

Imperial Refining Co. **San Angelo Refining Co.**
Kettle Creek Refining Co. **Wickett Refining Co.**

General Offices
TULSA, OKLAHOMA

Crude Oil Prices (in Effect June 17, 1929)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

Effective May 20, 1929

Grades A	$1.30	*Grades B	$1.15
‡Grades B (light crude):			
35-35.9	$1.49	40-40.9	$1.69
36-36.9	1.53	41-41.9	1.73
37-37.9	1.57	42-42.9	1.77
38-38.9	1.61	43-43.9	1.81
39-39.9	1.65	44 and above	1.85

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on all below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co., and Midwest Refining Co.

(Salt Creek prices effective May 20, 1929)

‡Salt Creek 29-29.9	$1.10
" " 30-30.9	1.15
" " 31-31.9	1.20
" " 32-32.9	1.25
" " 33-33.9	1.30
" " 34-34.9	1.35
" " 35-35.9	1.40
" " 36-36.9	1.45
" " 37 and above	1.50
Elk Basin	1.65
Grass Creek light	1.65
Big Muddy	$1.43
Lance Creek	1.68
Rock Creek	1.40
Mule Creek	1.20
Rex Lake	1.10
‡Osage	1.65
‡Cat Creek, Mont	1.65
Sunburst, Mont	1.75
‡Hogback, N. Mex	1.70
Artesia, N. Mex	1.08

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

CALIFORNIA

***Standard Oil Co. of California**

Gravity	Signal Hill Seal Beach Alamitos Heights Huntington Beach	Inglewood Torrance	Olinda-Brea Canon Richfield	Athens-Rosecrans Dominguez	Elwood Terrace	Whittier La Habra	Coyote Hills	Santa Fe Springs	Newhall McKittrick †Kern River	Midway Sunset Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Montebello	Kettleman Hills	*Santa Maria (Orcutt)	*Ventura
14-14.9	$ .70	$ .70	$ .70	....	....	$ .70	$ .70	....	$ .50	$ .50	$ .50	$ .50	$ .50	$ .70	....	$ .65	$ .70
15-15.9	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
16-16.9	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
17-17.9	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
18-18.9	.75	.75	.75	....	....	.75	.75	....	.50	.56	.56	.56	.56	.70	....	.70	.75
19-19.9	.80	.80	.80	....	....	.80	.80	....	.50	.62	.62	.62	.62	.75	$1.65	.70	.80
20-20.9	.85	.85	.85	....	....	.84	.84	....	....	.68	.68	.68	.68	.80	for	.70	.85
21-21.9	.89	.89	.89	....	....	.88	.88	.89	....	.74	.74	.74	.74	.85	55°	.86	.86
22-22.9	.93	.93	.93	....	....	.91	.91	.92	....	.80	.80	.80	.80	.90	gravity	.87	.87
23-23.9	.97	.97	.97	....	....	....	.94	.95	....	.85	.85	.85	.85	.95	and	.90	.90
24-24.9	1.01	1.01	1.01	1.01	....	....	.97	.98	....	.90	.90	.88	.88	.98	over	.94	.94
25-25.9	1.05	1.05	1.05	1.05	....	....	1.00	1.01	....	.95	.95	.91	.91	1.01	....	.98	.98
26-26.9	1.09	1.09	1.09	1.09	....	....	1.04	1.04	....	1.00	1.00	.94	.94	1.04	....	1.02	1.02
27-27.9	1.13	1.13	1.13	1.13	....	....	1.08	1.07	....	1.05	1.05	.98	.97	1.07	....	....	1.06
28-28.9	1.17	1.17	1.17	1.17	....	....	1.12	1.10	....	1.10	1.10	1.02	....	1.10	....	....	1.10
29-29.9	1.21	....	1.21	1.21	....	....	1.16	1.15	....	1.16	1.16	1.06	....	1.13	....	....	1.14
30-30.9	1.25	....	1.25	1.25	....	....	1.20	1.20	....	1.22	1.22	1.10	....	1.16	....	....	1.18
31-31.9	1.30	....	....	1.30	....	....	....	1.25	....	1.28	1.28	1.14	....	....	....	....	1.23
32-32.9	1.35	....	....	1.35	....	....	....	1.30	....	1.34	1.34	1.18	....	....	....	....	1.28
33-33.9	....	....	....	1.41	....	....	....	1.35	....	1.40	1.40	1.22	....	....	....	....	1.34
34-34.9	....	....	....	1.47	$1.16	....	....	1.40	....	....	1.46	1.26	....	....	....	....	....
35-35.9	....	....	....	1.53	1.22	....	....	1.45	....	....	....	1.30	....	....	....	....	....
36-36.9	....	....	....	1.59	1.28	....	....	1.50	....	....	....	....	....	....	....	....	....
37-37.9	....	....	....	1.65	1.34	....	....	1.55	....	....	....	....	....	....	....	....	....
38-38.9	....	....	....	1.71	1.40	....	....	1.60	....	....	....	....	....	....	....	....	....
39-39.9	....	....	....	1.77	1.46	....	....	1.65	....	....	....	....	....	....	....	....	....
40-40.9	....	....	....	1.83	1.52	....	....	....	....	....	....	....	....	....	....	....	....
41-41.9	....	....	....	1.89	1.58	....	....	....	....	....	....	....	....	....	....	....	....
42-42.9	....	....	....	1.95	1.64	....	....	....	....	....	....	....	....	....	....	....	....

*Santa Maria and Ventura postings are by Union Oil Co. Union Oil Co. posts same prices in all above fields as Standard except it does not post prices in Wheeler Ridge, Whittier, La Habra, Newhall and Kettleman Hills. Standard does not contract for crude testing 11-13.9 gravity, but pays 45c a barrel when purchased.

†Kern River down to 12° gravity is 50c; 11-11.9 is 45c.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	June 17	June 10
Soda Ash light 58% bags, cwt.	$1.32	$1.32
Silicate of Soda 60 deg. drums, cwt.	$1.55	$1.55
Silicate of Soda 40 deg. tank cars, cwt.	$0.60	$0.60
Silicate of Soda 40 deg. drums cwt.	$0.80	$0.80
Sal Soda wks	$0.90-1.00	$0.90-1.00
Caustic Soda 76% solid, cwt.	$2.90	$2.90
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00	$11.00
Oleum 20%, fuming sulfuric, tank cars, wks	$18.50	$18.50
Sulfur, flowers of, cwt.	$3.50-4.50	$3.50-4.50
Liquid Chlorine, tank cars, wks, lb.	3.50–5.00	3.50–5.00

Compounders' Supplies

	June 17	June 10
Vegetable Oils		
Linseed carloads, spot, lb.	10.40	10.30
Tanks, spot	9.60	9.50
Soya Bean, Tanks, coast, lb.	9.625	9.625
Oleic Acid		
Distilled, tanks, lb.	9.25	9.25
Distilled, bbls, lb.	10.375	10.375
Saponified, tanks, lb.	9.50	9.50
Saponified, bbls, lb.	10.625	10.625
Lard Oils		
Prime Winter Strained, lb.	15.00	15.00
Extra Winter Strained, lb.	13.00	13.00
Extra, lb.	12.625	12.265
Extra No. 1, lb.	12.00	12.00
No. 1, lb.	11.75	11.75
No. 2, lb.	11.50	11.50
Tallow oil, lb.	10.75	10.75
Neatsfoot Oil		
Pure, bbls, lb.	13.50	13.50
Extra, bbls, lb.	12.25	12.25
No. 1 bbls, lb.	12.00	12.00
Cold Pressed, lb.	18.75	13.75
Fish Oils		
Menhaden Oil		
Light Pressed, gal.	71	71
Light Pressed, tank cars, N.Y., gal.	65	65
White bleached, gal.	77	77
Yellow bleached, gal.	73	73
Whale, extra winter bleached, gal.	82	82
Naval Stores		
Steam distilled turpentine, N. Y., gal.	51	51
Steam distilled turpentine, Savannah, gal.	46	46
Gum turpentine, N. Y., gal.	54.00	54.00
Gum turpentine, f.o.b. cars Savannah, gal.	50	50
Wood Rosin F, N. Y., bbl.	$7.30	$7.30
Wood Rosin F, Savn'h, bbl.	$6.50	$6.50
Gum Rosin B, N. Y., bbl.	$7.50	$7.50
Gum Rosin B, f.o.b. cars Savannah, bbl.	$6.80	$6.80
Rosin oil, pure, gal.	61	61
Rosin oil, compounded, gal.	50	50
Pine Tar		
Kiln burnt, bbl.	$13.00–14.00	$13.00–14.00
Retort, bbl.	$13.50–14.50	$13.50–14.50
Alcohol		
Denatured Formula 5, in bbls., per gal.	57–64	57–64

OIL STOCKS AND FINANCES

National Petroleum News

Standard Oil Dividends Set Second Quarter Record

NEW YORK, June 15

CASH dividend disbursements by the Standard Oil group of companies in the second quarter of 1929 have again established a new high record of $66,047,877, according to figures compiled by Carl H. Pforzheimer & Co., specialists in Standard Oil securities.

This new high mark, which exceeds payments for the first quarter by approximately $3,000,000, was accomplished in the face of a reduction of $6,963,500 in dividends by the Standard Oil Co. of Indiana as compared with the first quarter. This company paid out $8,704,376 as the regular dividend of 62½ cents a share as compared with $15,667,877 in the preceding quarter when an extra dividend of 50 cents was paid along with the regular dividend.

This decrease was partially offset by a distribution of $3,100,000 of New York Transit Co. in connection with the readjustment of its capital structure, which entailed a special cash dividend of $62 a share.

Standard Oil Co. (N. J.'s) payments were $3,094,371 larger as the result of an increase in the extra dividend from 12½ cents a share to 25 cents a share.

Semi-annual dividends of Illinois Pipe Line Co. and Anglo-American Oil Co. increased the total figure $2,000,000 and $1,525,000, respectively.

For the first half of the current year cash dividend disbursements by this group will amount to $129,427,495 the highest amount ever paid out in any semi-annual period and larger than the dividends paid in the entire year of 1922.

The record of quarterly dividends in the last few years is as follows:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Full Year
1929	$63,379,618	$66,047,877	.....	.....	.....
1928	48,927,670	57,694,206	$50,068,102	$62,050,357	$218,740,334
1927	55,873,413	54,291,615	47,728,440	55,724,472	213,617,940
1926	40,580,317	*50,618,451	46,427,278	62,685,548	200,327,594
1925	34,355,618	41,905,728	35,140,584	42,104,169	153,506,099

*Includes $4,000,000 paid by Southern Pipe Line Co. in partial liquidation.

Transcontinental Will Retire Preferred

TULSA, June 15.—Plans for the reorganization of the capital structure of the Transcontinental Oil Co. will be voted on July 12 at a special meeting of stockholders. It is proposed to retire the 7 per cent cumulative preferred stock and to increase the authorized common stock from 4,000,000 to 7,000,000 no par shares.

Holders of the 157,500 $100 preferred shares, under directors' plans, are to receive $135 a share cash, which includes $35 accrued dividends, or $90 a share cash and five shares of common stock. The time for the exercise of their option is to be Aug. 19.

The company plans to offer holders of common stock one additional share at $9 a share for each two shares they hold of record July 23. Rights to subscribe are to expire Aug. 19.

With the completion of this reorganization plan, Transcontinental will have outstanding $12,000,000 6½ per cent mortgage bonds due in 1938, $1,076,000 of tank car and purchase money obligations and about 6,425,548 no par common shares.

The exact amount of outstanding common stock will be dependent on the extent to which common stock warrants previously issued in connection with the first mortgage bonds may be exercised prior to consummation of the plan. As of June 1 this year, 239,130 shares of unissued or treasury common stock were reserved for issuance under such warrants.

On completion of the plan, M. L. Benedum, John L. Kirkland and A. B. Dally, Jr., will retire from the board of directors and C. H. Huston will retire from the chairmanship. Amos L. Beaty, formerly chairman of The Texas Co., will become chairman of the board.

Mex Seaboard to Sell Employes Stock

NEW YORK, June 15.—Mexican Seaboard Oil Co. is planning to sell to its employes and its subsidiaries 30,000 shares of stock at $32 on terms and conditions its directors will fix. The company recently offered stockholders of May 29 record the right to subscribe for 248,877 shares of stocks at $32 a share on a basis of one share for each four held. Rights expire June 25.

With these issues Mexican Seaboard will have outstanding 1,276,873 no par shares. The new stock has just been listed on the New York Stock Exchange.

In the listing statement it was said the company had 61 producing wells and four wells drilling. Last year it produced 2,564,540 barrels of crude—2,247,237 in Mexico, 120,035 in Texas and 197,268 in California.

It also reported that its subsidiary, the Venezuelan Seaboard Oil Co., had contracted with the Gulf Oil Co. for the Gulf to drill three wells on its Venezuelan concessions. One well has already been drilled to 4000 feet.

Complete Tide Water Ownership Sought

NEW YORK, June 15.—Tide Water Associated Oil Co. shortly will make an offer to acquire complete ownership of the Tide Water Oil Co. by offering 1¾ shares of Tide Water Associated stock for each minority interest share of Tide Water Oil.

The terms have recently been decided on by Tide Water Associated directors. Holders of substantially large blocks of minority stock are reported to have agreed to accept the offer.

Jackson E. Reynolds, president, and Henry S. Sturgis, vice-president, of the First National Bank of New York, have been elected directors of Tide Water Associated.

Mountain Producers Corp.—Dividend has been reduced from 65 cents to 40 cents a share a quarter, reflecting the continued decline in production in the Salt Creek field in Wyoming. Present production in the Salt Creek field is only a little more than 60 per cent of what it was a year ago.

Good Buyers *Need* Good Cans

"What! More Cans?" . . . When requisitions for can replacements keep coming in irritating numbers it's time to determine whether the cheap can is cheap after all.

The Eastern manager of a large oil distributor decided that his side rack can costs were running too high and after a survey tried out the Ellisco can on some of his trucks. The test showed him that the Ellisco can gave twice as much service per dollar of cost, besides the time saving in ordering, etc., and the greater satisfaction of the truck drivers.

Many good buyers have standardized on Ellisco, because they have found it pays to buy good cans.

Have you our Catalog?

It shows how we make the Ellisco Side Rack Can better—and illustrates the complete Ellisco Line of measuring buckets, cans, funnels, filling stems, etc. We'll gladly send you a copy.

Why Truck Drivers Like This Can

Right from the top to the bottom this can satisfies the drivers. A new locking top—off and on in a jiffy—that stays put and prevents oil from slopping over the sides. Man size handles fit a big hand—and a glove. A swedged steel body jacket that allows them to slide the can over the rack and drop it without wondering about the extra knocks. And a bottom strong enough to be set down *hard*—without leaking at the seams.

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SUPER-SERVICE CANS FOR THE OIL TRADE

GEO. D. ELLIS & SONS, Inc., 220 Wood Street, Philadelphia, Pa.

ESTABLISHED 1843

THE MANUFACTURERS WHO MAKE THESE CANS THEIR MAIN LINE

Transactions in Oil Shares on New York Stock Exchange

1928 High	1928 Low	1929 High	1929 Low	Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended June 15 Sales	First	High	Low	Last	Change
43⅞	27⅛	42⅝	22½	(sh) 922,075	N.P.	Amerada Corp.	50cQ	Apr. 30, 29	4,400	27	27¼	25½	26	— 1½
85	51¼	64¾	43⅜	(sh) 209,180	N.P.	American Republics Corp.	....	.....	3,400	49½	52⅜	49	49	0
5 ⅜	37½	47¼	40	$56,000,000	$25	Associated Oil	50cQ	Mar. 31, 29	390	43½	43½	43	43	— ½
62½	50	71½	53½	50,000,000	25	Atlantic Refining	‡25cQ	June 15, 29	240,900	70⅝	71⅜	68¼	69½	— ⅝
118¼	114½	117⅝	114	20,000,000	100	do pfd.	$1.75Q	May 1, 29	.....	....	....	....	....	.....
53	20	49⅛	38⅛	47,261,125	25	Barnsdall Corp. A	50cQ	May 6, 29	36,400	43	43½	41	41⅛	— 1½
51¼	20	49	38⅛	300,525	25	do B	50cQ	May 6, 29	.....	....	....	....	....	.....
24½	12¼	28½	20	(sh) 956,075	N.P.	Beacon Oil	....	.....	7,900	25¾	27⅜	25	27	+ ¾
36	25¼	30	26¾	$51,524,150	$25	California Petroleum	....	Jan. 1, 29	.....	....	....	....	....	.....
94⅞	68	87⅜	63	21,031,400	100	General Asphalt	....	.....	50,700	83¾	*87⅜	83½	83⅞	+ 1¾
141	110⅛	131	104½	6,628,200	100	do pfd.	$1.25Q	June 1, 29	3,300	125½	*131	125½	127¾	— ½
167	79	107	70½	25,000,000	100	Houston Oil	....	.....	3,000	80	84	76¼	76¼	— 3½
38⅜	21¾	39¼	30	(sh) 1,333,157	N.P.	Independent Oil & Gas	50cQ	Apr. 30, 29	7,000	36¾	36½	35½	35¾	— ⅜
39⅝	9	52⅝	29	$4,299,190	$10	Indian Refining	....	Dec. 15, 20	92,100	47⅝	50½	44¾	45⅛	— 1¼
37¼	8½	48¾	28	4,550,110	10	do ctfs.	.....	.....	51,200	44½	48	41⅜	42⅝	— 1⅞
185	140	165	160	1,977,700	100	do pfd. new	$1.75Q	Apr. 1, 29	.....	....	....	....	....	.....
39⅛	27⅜	35⅛	26	3,992,387	N.P.	Lago Oil & Transport	....	May 2, 27	24,700	28½	*35⅛	28½	34	+ 4⅞
19¾	9⅜	18	12¾	(sh) 1,187,298	N.P.	Louisiana Oil Refining	.....	.....	11,900	13¼	13½	12⅞	13	— ⅛
96	78	100	89	$4,000,000	$100	do pfd.	$1.62½	May 15, 29	100	90⅝	90⅝	90½	90½	— 1
25½	12½	18½	12	(sh) 330,000	N.P.	Maracaibo Oil	....	.....	200	14⅛	14⅛	14	14	— 1¼
49¾	33	47⅛	33⅛	(sh) 2,316,897	N.P.	Marland Oil Co.	....	Mar. 31, 27	15,800	36	36	34	34⅞	+ ⅝
360	250	295	205	$45,942,800	$100	Mexican Petroleum	‡$3Q	Apr. 20, 29	30	212	220	210	210	—12
...	...	...	...	12,000,000	100	do pfd.	$2Q	Apr. 20, 29	.....	....	....	....	....	.....
73	45⅛	69⅜	36¼	(sh) 995,500	N.P.	Mexican Seaboard	....	Nov. 15, 24	29,000	42	42¾	37½	38½	— 3½
44½	25⅛	39⅞	30½	(sh) 1,857,461	N.P.	Mid-Continent	50cQ	May 15, 29	10,900	35	35¼	33½	33½	— 1⅞
120½	103¼	121	120¼	$6,718,000	$100	do pfd.	$1.75Q	June 1, 29	.....	....	....	....	....	.....
7⅜	2⅜	5⅛	3¾	23,849,720	10	Middle States	....	July 1, 23	8,300	4	4	3¾	3⅞	0
5⅞	1½	3½	2¼	5,950,500	10	do ctfs.	....	.....	2,100	2¾	3	2⅝	2¾	— ⅛
2¼	1	1½	1	(sh) 3,500,000	N.P.	Pacific Oil	....	.....	2,600	1	1⅛	1	1	0
55½	38¼	63	41⅛	$50,000,000	$50	Pan American P. & T.	....	Oct. 20, 27	1,300	58¾	59¾	56¼	56⅛	— 2⅜
58⅞	37¾	66¾	40½	121,101,400	50	do B.	....	Oct. 20, 27	113,200	62½	63⅜	59¼	60	— 2
28⅜	15½	17½	14	(sh) 400,000	N.P.	Pan American Western B.	....	Jan. 30, 27	.....	....	....	....	....	.....
21⅜	11½	15¼	9½	(sh) 199,370	N.P.	Panhandle P. & R.	....	.....	1,000	10½	10½	9⅝	9⅝	— ⅛
106¼	70	76	47½	$2,935,200	$100	do pfd.	.....	July 2, 23	100	62	62	62	62	0
53⅞	35¼	47	37¼	(sh) 2,406,803	N.P.	Phillips Petroleum	37½cQ	Apr. 1, 29	6,100	39½	40	38	38¼	— 1⅜
5¼	½	3⅜	2	$29,622,925	$25	Pierce Oil	....	.....	4,900	2	2¼	†2	2¼	0
50	16¼	51½	30	15,000,000	100	do pfd.	....	Feb. 1, 22	700	40	40	39¾	40	0
6⅝	3½	5⅞	4⅜	(sh) 2,500,000	N.P.	Pierce Petroleum	....	.....	900	4½	4¾	4½	4½	— ⅛
64⅝	59½	65⅝	55	$60,636,450	$25	Prairie Oil & Gas	....	Aug. 31, 27	8,100	58	58½	56¾	57⅛	— ⅜
...	...	61⅞	53⅝	101,250,000	25	Prairie Pipe Line	‡75cQ	Mar. 31, 29	5,300	60	60	58½	58⅝	— 1⅜
29⅞	16	25⅞	18¼	37,450,850	50	Producers & Refiners	....	Sept. 15, 23	1,900	18⅞	19½	18¼	19⅜	— 1
49⅜	41	45⅝	38⅛	2,845,350	50	do pfd.	....	May 1, 25	310	44	44	42½	42½	— 1½
31¼	19	30¾	23½	75,959,250	25	Pure Oil Co.	37½cQ	June 1, 29	33,100	28⅞	29⅛	27¾	27¾	— ¾
119	108	115½	111½	13,000,000	100	do 8% pfd.	$2Q	Apr. 1, 29	190	113½	†111½	112½	112½	+ 1⅞
56	23½	49⅝	40	47,127,725	25	Richfield Oil	50cQ	May 15, 29	12,900	43	43	40½	41⅞	— 1¼
...	...	42½	28⅛	(sh) 1,200,000	N.P.	Rio Grande Oil Co.	‡$1S.A.	Jan. 25, 29	55,000	29½	30½	†28	30⅛	+ ⅛
64	44⅝	55¾	31⅜	(sh) 546,646	$13.40	Royal Dutch N. Y. shares	$1.336	Feb. 8, 29	7,500	54½	55½	54¼	54½	+ ¼
57½	39⅜	55¾	43	(sh) 65,203,000	£2	Shell Transport & T.	96.4c	Feb. 8, 29	100	47	47	47	47	+ ½
39⅜	23¼	31¾	26	12,254,979	N.P.	Shell Union Oil	35cQ	Mar. 31, 29	15,900	28⅝	28⅞	27⅝	28	— ¼
27¼	18⅛	37¼	18¼	$8,357,280	$10	Simms Petroleum	40cQ	June 15, 29	23,900	33	33⅞	32¼	32⅝	— ½
46¾	17⅜	45	36	5,494,095	N.P.	Sinclair Consolidated	‡50cQ	Apr. 15, 29	76,100	39⅛	39⅜	37⅝	37¾	— 1¼
110	102½	111	107¾	$16,025,200	$100	do pfd.	$2Q	May 15, 29	500	109	109¼	109	109	+ ¼
42⅝	25	46⅛	32⅞	27,396,590	25	Skelly Oil Co.	50cQ	June 15, 29	21,100	42⅝	42⅞	40½	40¾	— 2
80	53	81⅞	64	(sh) 13,016,435	N.P.	S. O. California	62½cQ	June 15, 29	22,900	76⅛	77⅜	73⅛	73⅜	— 2
59¾	37¾	62¾	48	$612,095,850	$25	S. O. New Jersey	‡25cQ	June 15, 29	59,400	58⅞	59¾	57⅜	58¼	— 1
45½	28¾	45¾	38⅝	434,094,575	25	S. O. New York	40cQ	June 15, 29	29,900	40¼	40⅞	39⅜	39½	— 1
77	31½	68½	57	(sh) 1,297,847	N.P.	Sun Oil	25cQ	June 15, 29	100	62	62	62	62	0
110	100	105½	100	$5,000,000	$100	do pfd.	$1.50Q	June 1, 29	110	104	104	102½	102½	— ½
14¼	2½	12	7	(sh) 1,304,698	N.P.	Superior Oil Corp.	....	Dec. 20, 20	64,000	9	9⅛	7¾	8	— 1⅛
74¾	50	68⅛	57¼	$211,082,925	$25	The Texas Corp.	75cQ	Apr. 1, 29	23,100	62½	63⅞	61⅛	61⅞	— 1½
26⅝	12⅛	23⅞	16¼	8,380,340	10	Texas Pacific Coal & Oil	2½%s	Mar. 20, 29	4,600	18¼	18⅝	17⅛	17⅞	— ⅜
41½	19⅝	38½	27½	(sh) 2,179,275	N.P.	Tide Water Oil Co.	20cQ	Mar. 31, 29	8,900	39¼	39¾	37¼	37½	— 2¼
100⅛	86¾	97½	89¾	$20,321,000	$100	do 5½% pfd.	$1.25Q	May 15, 29	500	96	96	95	95	— 1⅛
25	14¾	23½	17½	(sh) 4,877,976	N.P.	Tide Water Associated	.....	Aug. 1, 27	32,400	22¾	22⅞	21½	21½	— 1¼
91¾	81⅞	90	85½	$72,989,200	$100	do pfd.	$1.50Q	Apr. 1, 29	1,400	88	88¾	87	87	— 2½
14½	6¾	13	9	(sh) 3,842,029	N.P.	Transcontinental Oil	....	.....	165,400	12	12¾	10½	10⅞	— 1⅛
58	42¾	54⅛	46	$40,858,375	$25	Union Oil of California	50cQ	May 10, 29	3,200	48⅜	48⅝	47¼	47⅜	— 1⅜
128⅛	110	150¼	121⅞	31,101,200	100	Union Tank Car Co.	$1.25Q	June 1, 29	5,000	130	146¾	130	141	+10
44⅞	26	42⅞	28½	(sh) 488,359	N.P.	Warner Quinlan	50cQ	Apr. 2, 29	1,100	32⅛	32⅛	30⅝	31⅜	— ⅜
38	20⅛	37⅞	30¼	(sh) 490,000	N.P.	White Eagle Oil & Refining	50cQ	Apr. 20, 29	4,200	35	35⅛	34½	34⅞	— ⅛
22⅛	17¾	29⅜	19½	(sh) 428,967	N.P.	Wilcox Oil & Gas	....	May 10, 28	5,400	22¾	23⅛	21⅜	21⅜	— 1⅜

*New High †New Low XEx-dividends ‡Also extras s-Stock Total Sales 1,428,930

Pittsburgh Stock Exchange

Transactions Week Ended June 14, 1929

	Sales	High	Low	Last	Change
Ark. Nat. Gas....	4,475	9⅛	8¾	8⅞	— ⅛
do pfd.....	2,034	8¼	8⅛	8⅛	0
Devonian Oil....	1,926	11	9½	10	+ ¾
Lone Star Gas....	1,682	79½	78⅞	79½	0
Pet. Exploration..	100	29½	†29½	29½	— ½
Plymouth Oil....	110	24	24	24	—1
Pgh. Oil & Gas...	125	3½	3½	3½	0
Waverly Oil Wks. A	900	25	†25	25	—5

†New low.

Oil Company Earnings

Year	1928	1927
Anglo-American Oil.....	£432,693	£208,213
Royal Dutch Co.....	fl103,367,780	fl101,978,637
First Quarter	**1929**	**1928**
Indep. Oil & Gas.....	$2,018,850	*$419,398

*Loss.

Pittsburgh Curb Market

Transactions Week Ended June 14, 1929

	Sales	High	Low	Last	Change
Ark. Gas "A"....	2,088	9⅛	9⅛	9½	0
Leonard Oil & Dev.	150	4	4	4	.....
	Unlisted				
Lone Star, W. I...	505	32½	32¼	32½	0

Warner Quinlan Buys Shingle Company

NEW YORK, June 15.—Warner Quinlan Co. acquired the Lancaster Asphalt Co., Inc., manufacturer of a heavy butt tapered asphalt shingle, by the exchange of 22,500 no par shares for the outstanding 10,000 no par Lancaster common shares.

Lancaster has outstanding $151,400 of 7 per cent cumulative preferred stock which was not involved in the deal. Assets of the Lancaster company March 31 amounted to $310,338, its statement shows.

The Lancaster company holds important patents, it is said, and has been manufacturing the shingles for six months at its Long Island City factory. Warner Quinlan has been supplying it with asphalt.

Cleveland Stock Market

June 14	Par Value	Bid	Asked
Canfield Oil Co.....	$100	...	140
do pfd.....	100	103	...
Fred G. Clark.....	10	11⅛	12
National Refining.....	25	35½	36½
do pfd.....	100	...	135
Paragon Refining.....	25	23½	24½
do pfd.....	N.P.	41½	44
do ctfs. of deposit.....	...	23	24½

xEx dividend.

Texon Oil & Land Co.—Following acquisition of control by Marland Oil Co., W. W. Bruce, vice-president of Marland, has been elected president of Texon, and E. J. Nicklos has been elected vice-president and general manager. B. H. Markham, treasurer of Marland, and L. N. Nickey have been added to the Texon board.

Pan American Petroleum & Transport Co.—All retiring directors were re-elected at annual meeting.

Neon border in red for attention power combined with Flexlume raised glass letters for striking day and night effect.

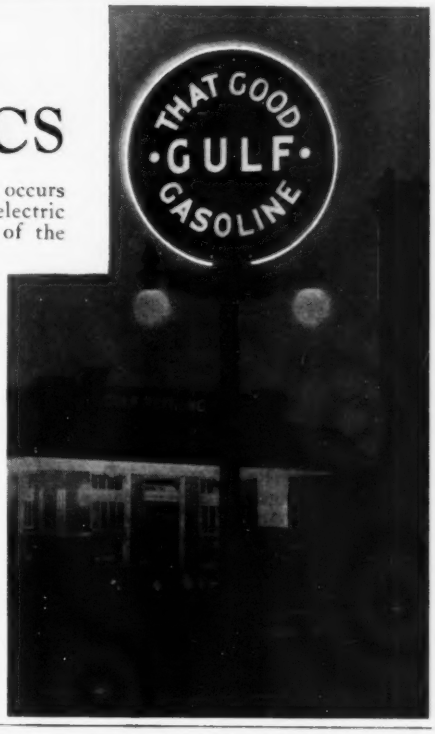
The NEWEST *Idea in* ELECTRICS

WHETHER the greater part of your gas and oil sales occurs during daylight or evening hours, this latest type of electric sign will give you contact with passing traffic every minute of the day and night.

It utilizes the drawing power of red, blue or green neon* borders combined, for pleasing and highly legible contrast, with the brilliance of Flexlume raised glass letters illuminated from within.

**(NOTE: Neon, from Greek word meaning new, the common name for a gas constituent of air discovered by the English scientist, Sir William Ramsay)*

These striking station-location electrics require less of an investment to own; they operate without irritating interruptions; they are maintained without difficulty. Let us submit details and color sketch of a Flexlume—neon, neon bordered, raised glass letter or combination design—to satisfy your exact needs.



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FLEXLUME CORPORATION
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"If you were to wire me for Mid-Continent gasoline prices today, I would phone a member of the OILGRAM staff, and my reply to you would be the *gist of what he told me.* The OILGRAM staff is in direct and close contact with the markets almost every hour of the business day. *They know their business.*"

You too, can have the benefit of this close contact with all phases of the market at all the principal refining and marketing centers.

The service costs only $25 a quarter, or $75 a year, payable in advance. Approximately 30 cents a day—less than the cost of one wire or one phone call.

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Safety

OUR guiding principle is to build, not drums, but sure protection for the products that are shipped in them, and this principal is an assurance of the safety of your product.

If you do not already know Benetco steel drums, it is time to get acquainted. Write for the Benetco booklet series describing the containers which you should be using.

BENETCO
Steel Drums

Wilson & Bennett Mfg. Co.

6520 S. Menard Ave., Chicago

Standard Oil Stocks on New York Curb

1928 High	1928 Low	1929 High	1929 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Sales	Week Ended June 15 First	High	Low	Last	Change
22⅜	14⅞	18¾	14¼	£4,126,460	£ 1	Anglo-American Oil	36c	June 5, 29	1,500	15	15	14½	14½	— ⅛
21¼	15	18	14½	.....	....	do certificates	36c	June 5, 29	.....	....	....	....	....	.....
20½	14⅜	17	13	.....	£ 1	do cts. non-voting	36c	June 5, 29	800	13⅝	14	†13	13	— ⅜
5	1¼	2⅜	1⅛	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	20	1¼	1⅝	1¼	1⅝	0
9¾	3¼	4⅛	1½	$10,000,000	$50	do pfd	.....	.....	.....	....	....	....	....	.....
56	44½	46½	38	$1,000,000	25	Borne-Scrymser	‡$1S.A.	Apr. 15, 29	.....	....	....	....	....	.....
76	58	74¼	58⅜	10,000,000	50	Buckeye Pipe Line	‡$1Q	June 15, 29	200	69¾	69¾	68	68	— 2¼
161	117¼	170¼	140½	3,000,000	25	Chesebrough Mfg	‡$1Q	Mar. 31, 29	100	164¾	164¾	164¾	164¾	— ¼
23	16	29	17⅛	36,123,350	10	Continental Oil	.....	Dec. 15, 27	14,500	20¾	21¼	20	20¾	— ¼
17½	9½	11⅜	8	.....	N.P.	Creole Petroleum	.....	.....	8,100	9⅛	9¼	8½	8¾	— ¼
82	67	75¾	62	1,500,000	50	Cumberland Pipe Line	$1Q	June 15, 29	50	69	69	69	69	0
88	64⅛	70½	59¼	5,000,000	100	Eureka Pipe Line	$1Q	June 1, 29	50	61¾	61¾	61¾	61¾	+ 1¾
13	4¼	6⅝	5	16,000,000	100	Galena Signal Oil	.....	June 30, 25	100	5	5	†5	5	0
86	26	90	73½	4,000,000	100	do new pfd	.....	June 30, 26	10	81½	81½	81½	81½	0
89¾	35	88	73½	2,000,000	100	do old pfd	.....	June 30, 26	.....	....	....	....	....	.....
114¾	59¼	124⅛	89⅝	73,685,700	25	Humble Oil & Refining	‡30cQ	Apr. 1, 29	7,000	118½	119⅜	115⅛	116	— ½
290½	176½	340½	285	20,000,000	100	Illinois Pipe Line	$10S.A.	June 15, 29	50	315	315	315	315	— 2
104	56¾	119⅝	88	(sh) 6,605,442	N.P.	Imperial of Canada	12½cQ	June 1, 29	.....	....	....	....	....	.....
....	....	....	....	.....	....	do new	.....	.....	8,900	27¾	27¾	26¾	27¼	— ½
91⅞	74⅝	97	81¼	$5,000,000	$50	Indiana Pipe Line	‡$1Q	May 15, 29	800	95¾	95¾	94¾	94¾	— 1
55	35	65⅛	46⅛	(sh) 7,123,544	N.P.	International Petroleum	25c	Mar. 15, 29	7,400	49	49¼	47⅝	47¾	— ¾
32⅝	19⅜	25⅞	21⅜	$6,363,350	12.50	National Transit Co	25cQ	June 15, 29	300	22⅝	23	22⅝	23	0
75	38½	85	72	5,000,000	100	New York Transit	.....	July 15, 26	.....	....	....	....	....	.....
....	....	....	....	.....	....	do new	.....	.....	100	13	13	†13	13	0
69	56½	63	54	2,000,000	50	Northern Pipe Line	$2S.A.	Jan. 2, 29	100	54⅛	55	54⅛	55	0
83½	58½	75⅜	64⅛	60,000,000	25	Ohio Oil Co	50cQ	June 15, 29	1,500	75	75	73	73	— 2
84	28	44⅛	23⅛	10,000,000	25	Penn Mex. Fuel	75c	Dec. 16, 28	.....	....	....	....	....	.....
220	167	50	39⅛	4,000,000	25	Solar Refining	$5S.A.	Dec. 20, 28	100	40¾	40¾	†39⅛	39⅛	— ⅞
19	12	22⅛	13	1,000,000	10	Southern Pipe Line	$1	Mar. 1, 29	200	20⅜	20⅜	20	20	— ¼
71⅞	36¾	60¼	40⅜	30,000,000	25	South Penn Oil	50cQ	Mar. 31, 29	800	53½	53½	52	52	— 1½
102	70	70	62¾	1,750,000	50	South West Pa. Pipe Lines	$1	Apr. 1, 29	.....	....	....	....	....	.....
95⅞	70⅞	103¼	54	348,175,069	25	S. O. Indiana	62½cQ	June 15, 29	14,600	57	57	55⅛	55⅝	— 1¼
27¾	15	21⅞	18	8,000,000	25	S. O. Kansas	.....	June 16, 24	3,700	21⅛	22⅛	21⅛	22	+ ¾
49	44	45¼	35⅛	25,654,516	10	S. O. Kentucky new	40cQ	Mar. 31, 29	3,600	38	38⅜	36¼	37¼	— ½
54⅜	39⅞	50¼	45½	4,649,225	25	S. O. Nebraska	‡62cQ	Mar. 20, 29	100	47⅝	47⅝	47⅝	47⅝	0
134	71	129	110¼	14,000,000	25	S. O. Ohio	62½cQ	Apr. 1, 29	800	121½	124	121⅜	121⅜	— 1⅛
125	116	124½	115	7,000,000	100	do pfd	$1.75Q	June 1, 29	.....	....	....	....	....	.....
23½	16	18	14	861,466	25	Swan Finch Co	30c	Jan. 15, 29	10	17	17	17	17	0
111	72	133¾	105½	126,154,000	25	Vacuum Oil	$1Q	Mar. 20, 29	1,800	116⅝	116⅝	114⅛	114⅛	— 1⅞

•New High †New Low ‡Also Extras

Independent Oils on New York Curb

1928 High	1928 Low	1929 High	1929 Low	Par Value	Stocks	Transactions Sales	Week Ended June 15 First	High	Low	Last	Change
1½	.53	.72	.375	$ 5	Amer. Cons. Oilfields	15,800	⅜	⅜	⅜	½	+ ⅛
9½	3⅛	8⅝	3⅛	N.P.	Amer. Maracaibo	600	4	4	†3½	3½	— ½
4½	2¼	5	1⅞	$10	Argo Oil	500	2¼	2¼	2⅛	2⅛	0
3¾	3⅜	9⅜	3¾	10	Arkansas Nat. Gas	52,200	9	9⅜	8¾	9⅜	+ ¼
55	32⅜	62	50	N.P.	British American Oil	.....	....	....	....	....	.....
23⅞	3¾	4⅞	2⅝	25c	Carib Syndicate	600	3¼	3⅝	3¼	3⅜	— ⅛
.....	....	31¼	27¾	....	Cities Service new	64,200	28½	28⅜	28⅜	28⅝	— ⅛
103½	94½	98½	88⅜	100	do pfd	800	97¾	97¾	96⅞	97⅜	— ½
9⅜	8⅞	9¼	8⅞	10	do pref. B	100	9	9	9	9	0
97	88½	96	92	100	do pref. BB	400	93¾	93¾	93½	93½	0
35¼	27⅜	....	....	10	do Bankers	.....	....	....	....	....	.....
2¼	1	1½	⅞	1	Colombia Syndicate	2,800	1	1	⅞	1	+ ⅛
17¾	9¾	15	6	....	Colon Oil	2,400	8½	8½	7⅝	8	— ½
8⅞	6¼	11⅛	6¾	10	Consolidated Royal	1,400	7	7	7	7	— ½
3¼	.76	2½	1⅛	N.P.	Crown Central	400	1½	1⅝	1½	1½	0
15	6¾	11¾	8	N.P.	Crystal Oil	.....	....	....	....	....	.....
50	48	51⅛	51¼	$100	do pfd	3,400	15⅝	15⅝	15	15¼	— ½
33½	8⅛	26	14	N.P.	Darby Petroleum	.....	....	....	....	....	.....
13½	7⅞	....	....	....	do trust ctfs	5,400	8⅛	8⅞	8	8⅜	+ ⅛
2⅞	1	9⅝	2	N.P.	Derby Oil & Refining	.....	....	....	....	....	.....
21⅛	7½	39⅛	20⅞	N.P.	do pfd	.....	....	....	....	....	.....
2	1	....	....	N.P.	Gibson Oil	.....	....	....	....	....	.....
.53	.15	....	....	N.P.	Gilliland ctfs	48,700	176	179⅛	172⅛	172⅛	— 3
165	101⅛	189	142⅛	$25	Gulf Oil Corp	400	4	4¼	†4	4	— ¼
7⅛	5⅝	7½	4	5	Homaokla Oil	18,500	1⅜	1⅜	1½	1½	— ⅜
3⅜	1	2⅞	1¼	10	Intercontinetal Pet	100	1⅝	1⅝	1⅝	1⅝	— ⅛
3	⅛	3⅝	1½	N.P.	Kirby Petroleum	12,200	3¼	4⅛	3¼	4½	+ 1⅜
9⅜	5½	6⅛	2⅞	N.P.	Leonard Oil & Dev	5,000	34⅛	35¼	33	33	— 1¼
43⅜	20	38⅞	24¾	N.P.	Lion Oil & Refg	900	79⅛	79⅛	79	79	— 1
69⅛	48⅛	80	67	$25	Lone Star Gas	4,500	½	⅝	½	½	0
1⅞	.50	1¼	⅝	1	Magdalena Syndicate	200	21¼	21¼	†21¼	21¼	— 1¾
48½	32	38½	21¼	N.P.	Margay Oil	.....	....	....	....	....	.....
40½	40½	....	....	$10	Mexican-Panuco	.....	....	....	....	....	.....
8	2¾	6⅜	3⅝	N.P.	Mexico-Ohio Oil	.....	....	....	....	....	.....
.74	.20	....	....	$10	Mexico Oil	900	⅞	⅞	⅞	⅞	0
1¾	.76	1½	⅞	1	Mountain & Gulf	4,800	16⅞	17⅛	16⅜	16⅜	— ⅝
28⅞	19½	22⅞	16⅜	10	Mountain Producers	200	3⅞	3⅞	3⅞	3⅞	0
5⅝	4¼	5	3⅞	5	New Bradford	300	3	3⅛	3	3	0
5½	3	3⅛	3	10	New England Fuel	200	5¾	6	5¾	6	+ ⅛
11⅞	7⅛	9⅜	5½	1	New Mex. & Ariz	200	18	18⅛	17⅞	17⅞	— ⅛
15½	11½	....	....	25	New York Petrol	.....	....	....	....	....	.....
40	39⅛	....	....	....	North Amer. Oil Cons	100	10⅝	10⅝	10⅝	10⅝	— ⅜
13¼	8⅛	11⅝	8¾	N.P.	North Cent. Texas	400	15⅜	15½	14¾	14¾	— ⅛
....	....	19¼	14⅜	N.P.	Oil Stock, Ltd. A	.....	....	....	....	....	.....
....	....	18¾	15	N.P.	do B	2,100	16⅝	17	16½	16½	— ⅜
26¼	20	23¼	16	N.P.	Pacific Western Oil	600	2⅛	2⅛	†1⅞	2	— ½
6	2¼	3½	1⅞	N.P.	Pandem	600	6¼	6½	6⅛	6½	0
15⅝	8½	10¼	6	N.P.	Pantapec	100	22½	24	22½	24	+ 1½
20	10⅝	....	....	$25	Paragon Refg. B. ctfs	.....	....	....	....	....	.....
.09	.04	....	....	N.P.	Peer Oil Corp	.....	....	....	....	....	.....
7¾	4⅞	7⅜	4⅜	$10	Pennok Oil	1,500	27⅞	27⅞	27¼	27¼	— ¾
....	....	34½	27⅛	N.P.	Petroleum Corp	.....	....	....	....	....	.....
5⅜	3⅛	....	....	$5	Pittsburgh Oil & Gas	2,100	23⅛	23½	23⅛	23⅛	— ⅞
31⅜	26½	30	22½	N.P.	Plymouth Oil	.....	....	....	....	....	.....
18	8	16	11½	25	Red Bank Oil	500	5⅝	5⅝	5¼	5¼	— ⅛
13	4⅛	8⅛	5	N.P.	Reiter-Foster	.....	....	....	....	....	.....
31½	23¼	25½	23⅞	$25	Richfield pfd	300	25½	25¾	25½	25½	— ¼
....	....	29	23½	....	Root Refining pfd	200	6⅝	6⅝	6⅝	6⅝	0
12	4⅜	11	6⅝	N.P.	Ryan Consolidated	300	3⅜	3⅜	3¼	3⅜	0
7¼	5½	5⅞	3⅛	$10	Salt Creek Cons	900	18⅞	19⅛	18⅞	19	0
35	23¼	25⅞	17¾	10	Salt Creek Prod	.....	....	....	....	....	.....
3½	1	2¼	1⅜	5	Savoy Oil	.....	....	....	....	....	.....
40	27	33⅛	32	25	Shreveport El Dorado	.....	....	....	....	....	.....
....	....	23	15½	N.P.	Texon Oil & Land	1,600	17½	17½	16½	16½	— ¾
22⅞	13	16⅞	11⅝	$10	Tidal Osage	.....	....	....	....	....	.....
21¼	13⅛	16½	10⅛	10	do not-voting	.....	....	....	....	....	.....
93¾	75	129	80	100	Transcontinental pfd	5,700	124¾	138	124¾	136	+ 8¼
74¼	18	70½	66	10	Venezuela-Mexico	.....	....	....	....	....	.....
9⅛	4⅜	6½	3⅜	5	Venezuelan Petrol	2,900	4	4¼	3⅞	4	0
8¼	4⅞	9⅛	5⅛	1	Woodley Petroleum	3,400	5⅛	5⅜	5⅛	5¼	— ¼
⅜	⅛	5⅜	1⅝	25	Y Oil & Gas	200	2⅛	2⅛	†1⅝	1⅝	— ⅜

*New High †New Low

New York Curb Bonds

Week Ending June 14, 1929

	High	Low	Last	Change
Beacon Oil 6s '36	115	112	115	+2¾
Cities Serv. 5s '66	87⅝	87¼	87¼	0
Cont. Oil 5½s '37	94½	93½	93½	— ⅛
Empire O. & R. 5½s '42	88	87¼	87¼	— ½
Gulf Oil 5s '37	99⅝	99	99½	0
Gulf Oil 5s '47	100⅜	99⅞	100	0
Indep. Oil 6s '39	113⅞	110¼	111¼	+ ⅛
Richfield Oil 5½s '31	100¼	100	100	0
Richfield Oil 6s '44	99½	99¼	99½	+ ¼
Valvoline Oil 7s '37	104½	104½	104½	0

Oil Dividends

	Amount	Payable	Stock of Record
Ark. Nat. Gas pfd. q	15c	July 1	June 20
Gulf Oil q	37½c	July 1	June 20
Mexican Pet. q	$3	July 20	June 29
do pfd. q	$2	July 20	June 29
Mountain Prod. q	40c	July 1	June 15
Nat'l. Refg. pfd. q	$2	July 1	June 15
Shreveport-El Dorado P. L. q	50c	July 1	June 20
Tide Water Oil q	20c	June 29	June 17
Tide Water Assoc. pfd	$1.50	July 1	June 17
White Eagle q	50c	July 20	June 28

New York Bonds

Week Ending June 14, 1929

	High	Low	Last	Change
Assoc. Oil gold 6s	101	100½	101	+ ⅜
Atlantic Refg. deb. 5s	100¾	100	100	— ⅞
Cal. Pet. 5s	97¼	96½	97	0
Cal. Pet. 5½s	99	98½	99	+ ½
General Asphalt 6s	106½	105¼	106½	+1¼
General Pet. 5s	101⅛	100⅜	101⅜	+ ⅛
Humble Oil & Refg. 5s	100¼	100	100	0
Humble Oil & Refg. 5½s	101	100½	100⅝	— ⅛
Pan Amer. P & T 7s	104¾	104¾	104¾	+ ¼
Pan Amer. P & T 6s	108	107	107⅛	— ⅝
Pan Amer. P & T 6s	94	93¾	94	0
Pierce Oil deb. 8s	106⅛	106	106	+ ⅜
Phillips Pet. 5½s	89	88¼	88¼	— ¾
Pure Oil 5½s	98	97½	97½	— ½
Shell Union Oil 5s	96½	96	96½	— ⅜
Simms Pet. 6s	99	99	99	0
Sinclair Con. Oil 7s	102	101	101½	+ ¼
Sinclair Con. Oil 6½s	100	99½	99¾	— ¼
Sinclair Con. Oil 6s D	99¼	99	99	0
Sinclair Con. Oil Crude 5½s	95¼	94¾	94⅞	+ ⅝
Sinclair Pipeline	93¾	93½	93½	0
Skelly Oil 5½s	93⅝	93½	93½	0
S. O. N. Y. 4½s	95⅞	95	95	+ ¼
S. O. N. J. 5½s	101⅝	100¾	101⅜	+ ⅜
Trans.-Cont. Oil 6½s	99½	98	98	—1½
Union Oil of Calif. 5s C	95⅞	95⅞	95⅞	0
White Eagle Oil 5½s	100½	99⅝	99⅝	+ ⅝